This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

577.05
M246

LELAND·STANFORD·JVNIOR·VNIVERSITY

MAN

A MONTHLY RECORD OF ANTHROPOLOGICAL SCIENCE.

PUBLISHED UNDER THE DIRECTION OF THE

ANTHROPOLOGICAL INSTITUTE

OF

GREAT BRITAIN AND IRELAND.

V.

1905.

Nos. 1—108.

WITH PLATES A—M.

PUBLISHED BY

THE ANTHROPOLOGICAL INSTITUTE,

3, HANOVER SQUARE, LONDON, W.

LIBRARY
LELAND STANFORD JUNIOR
UNIVERSITY

CONTENTS.

ORIGINAL ARTICLES.

No.

Africa. The Religion of the Fans. ANDREW LANG 31

Africa, East. Exploration of a Bushman's Cave, in Alfred County, Natal. (*Illustrated.*) WILLIAM BAZLEY 5

Africa, East. Further Notes on the Eldorobo, or Oggiek. C. W. HOBLEY, C.M.G. 21

Africa, East. Masai Ear-ring of Stone. (*Illustrated.*) A. C. HOLLIS 12

Africa, East. Notes on the Boni Hunters of Jubaland. CAPT. R. E. SALKELD 94

Africa: Kwilu. Notes on the Natives of the Kwilu, Congo Free State. (*Illustrated.*) E. TORDAY 75

Africa, South: Kitchen Middens. The Port Nolloth Kitchen Middens. (*Illustrated.*) R. COLSON 93

Africa, South-West. Fetishes from Landana, South-West Africa. (*Illustrated.*) BEN. H. MULLEN, M.A. 59

Africa, West. A Necklace of Glass Beads from West Africa. (*With Plate A.*) C. H. READ, F.S.A. 1

Africa, West. Steatite Figures from West Africa, in the British Museum. (*With Plate G. and two Illustrations.*) T. A. JOYCE, M.A. 57

Africa. *See also* EGYPT; TUNIS.

America, North: Craniology. Crania from Shell-bearing Sandhills, near San Francisco, now in the Cambridge Museum. W. INNES POCOCK 81

America, South: Animal Superstitions. Animal Superstitions among the Araucanians. Communicated by N. W. Thomas, M.A. C. A. SADLEIR... 60

America. *See also* CANADA; TIERRA DEL FUEGO.

Anthropology. Misgivings of an Anthropologist. ANDREW LANG 4

Anthropology. *See also* PHYSICAL ANTHROPOLOGY.

Anthropometry. Anthropometric Identification: a New System of classifying the Records. (*With Diagram.*) J. GRAY, B.Sc. 52

Archæology: Eoliths. Machine-made Eoliths. W. J. LEWIS ABBOTT, F.G.S. 80

Archæology: Eoliths. Machine-made Eoliths. O. M. DALTON, M.A., F.S.A.... 67

Archæology: Eoliths. Eoliths and pseudo-Eoliths. Rev. H. G. O. KENDALL, M.A.... ... 91

Archæology: Eoliths. Machine-made Eoliths. J. RUSSELL LARKBY 92

Archæology: Eoliths. Is it certain that Eoliths are made by Man? (*With Plate M. and Illustration.*) Dr. HUGO OBERMAIER 102

Archæology: Eoliths. On the Origin of Eoliths. (*Illustrated.*) S. HAZZLEDINE WARREN, F.G.S. 103

Archæology. *See also* EGYPT; ENGLAND; FLINT IMPLEMENTS; SINAI.

Asia. *See* INDIA; SINAI.

Australia: Religion. Baiame and the Bell Bird. N. W. THOMAS, M.A. 28

Biography. *See* OBITUARY.

Borneo. Note on the Peoples of Borneo. ERNEST B. HADDON 13

Borneo. Studies in Bornean Decorative Art: 1. Patterns derived from the Roots of the Fig Tree. (*Illustrated.*) A. C. HADDON, Sc.D., F.R.S. 39

Canada: Indians. Canadian Indians in 1904. DAVID BOYLE 32

Congress. Preliminary Notice of the Fifteenth International Congress of Americanists ... 108

Craniology. *See* AMERICA, NORTH; EGYPT.

Egypt. The Early Occurrence of Iron in Egypt. H. R. HALL, M.A. 40

Egypt. Note upon Excavations made 1904–05. (*With Plate K.*) J. GARSTANG, M.A., B.Litt., F.S.A. 79

Egypt. Palæolithic Implements from the Thebaïd. (*With Plate C, and Illustration.*) H. R. HALL, M.A. 19, 42

Egypt. The Excavation of the XI dynasty Temple at Deir el-Bahari, Thebes. (*Illustrated.*) H. R. HALL, M.A. 66

Egypt: Craniology. Composite Photographs of Early Egyptian Skulls. (*With Plate E.*) Prof. A. THOMSON, M.A., M.B. 38

Egypt: Craniology. Note on Dr. Keith's review of "The Ancient Races of the Thebaïd," by Prof. Arthur Thomson and D. Randall-MacIver. Prof. KARL PEARSON, F.R.S. 65

Egypt: Craniology. Note on Dr. A. Keith's review of "The Ancient Races of the Thebaïd" (MAN, 1905, 55). Prof. ARTHUR THOMSON, M.A., M.B. 58

No.

England: Archæology. An Excavation in Kemerton Camp, Bredon Hill. (*Illustrated.*) B. C. A. WINDLE, D.Sc., F.R.S., F.S.A. 74

Europe. *See* ENGLAND; HUNGARY; RUSSIA.

Fiji. A Double-headed Club from the Fijian Islands. (*With Plate B.*) HENRY BALFOUR, M.A. 9

Flint Implements. The Patination of Flint Implements. A. J. HOGG... 3

Folklore. *See* AMERICA, SOUTH; RUSSIA.

Hungary. Hungarian Physiognomy. JOHN BEDDOE, M.D., F.R.S. 95

India: Fire Walking. Passing through the Fire at Phalen. CAPT. G. R. HEARN, R.E. ... 83

Magic. A Further Note on Magic. N. W. THOMAS, M.A. 82

Magic. The Evil Eye and the Camera. (*Illustrated.*) J. L. MYRES, M.A., F.S.A. 6

Magic. *See also* NEW GUINEA.

New Guinea. Further Note on the Progress of the Cook-Daniels Expedition. C. G. SELIGMANN, M.B. 29

New Guinea. Introductory Notes to a Study of the Totemism of the Elema Tribes. (*Illustrated.*) Rev. J. H. HOLMES 2, 10

New Guinea. Note on a Painting on Bark from the Aird River Delta, British New Guinea. (*With Plate L.*) C. G. SELIGMANN, M.B. 89

New Guinea. Note on a Skull prepared for Purposes of Sorcery, from the Mikeo District. (*With Plate D.*) C. G. SELIGMANN, M.B.... 27

New Guinea: Tatuing. Tatuing at Hula, British New Guinea. (*Illustrated.*) A. C. HADDON, Sc.D., F.R.S.... 53

New Hebrides: Forgeries. Note on a Forged Ethnographical Specimen from the New Hebrides. (*Illustrated.*) J. EDGE-PARTINGTON... 41

Obituary. Professor Adolf Bastian. (*Illustrated.*) Prof. E. B. TYLOR, D.C.L., F.R.S. ... 76

Obituary. Thomas George Bond Howes, F.R.S. A. C. HADDON, Sc.D., F.R.S.... 22

Obituary. Hjalmar Stolpe. C. H. READ, F.S.A. 30

Pacific. *See* BORNEO; FIJI; NEW GUINEA; NEW HEBRIDES.

Physical Anthropology. *See* AMERICA, NORTH; ANTHROPOMETRY; CRANIOLOGY; EGYPT.

Physical Deterioration. Memorial addressed by the Anthropological Institute to the Lord President of the Council 51

Religion. *See* AFRICA; AUSTRALIA; MAGIC; NEW GUINEA.

Russia: Animal Folklore. Animal Folklore from Russia. Prof. JANSCHUL and N. W. THOMAS, M.A. 11

Sinai. Note on the Antiquities of Sinai. R. CAMPBELL THOMPSON, M.A. 73

Sinai. Note on Semitic Worship in Sinai. Prof. W. M. FLINDERS PETRIE, D.C.L., F.R.S. ... 104

Sinai. Note on Sinaitic Antiquities. (*Illustrated.*) R. CAMPBELL THOMPSON, M.A.... ... 54

Sinai. The Sinai Expedition, 1904-5. (*With Plate H. and Illustrations.*) Prof. W. M. FLINDERS PETRIE, D.C.L., F.R.S. 64

Solomon Islands. Bird and Human Designs from the Solomon Islands. (*With Plate F.*) HENRY BALFOUR, M.A. 50

Solomon Islands. Further Note on Funerary Ornaments from the Solomon Islands. (*Illustrated.*) C. M. WOODFORD, F.R.G.S. 20

Tatu. *See* NEW GUINEA; TIERRA DEL FUEGO; TUNIS.

Tierra del Fuego. Tatu in Tierra del Fuego. (*Illustrated.*) H. LING ROTH 90

Tunis. Tatu in Tunis. (*With Plate I-J. and Illustrations.*) H. LING ROTH 72

REVIEWS.

Africa. Powell-Cotton. *In Unknown Africa.* (*Illustrated.*) R. W. FELKIN, M.D. 14

Africa, East. Hollis. *The Masai: their Language and Folklore.* (*Illustrated.*) A. WERNER 62

Africa, East. Lyne. *Zanzibar in Contemporary Times.* R. W. F. 100

Africa, South. Hall. *The Great Zimbabwe.* FRANKLIN WHITE 61

Africa, West. Partridge. *Cross River Natives.* (*Illustrated.*) H. H. J. 23

Africa and Oceania. Von Luschan. *Anleitung zur Photographie der Beobachtung.* N. W. THOMAS, M.A. 25

Africa. *See also* EGYPT; MADAGASCAR; TUNIS; UGANDA.

America. Beatrice McMaster. *Narrative of the Capture of Mr. and Mrs. Eyre by the Expedition under the command of Captain Jones with Chief.* E. B. 84

Anthropology. Duckworth. *Studies from the Anthropological Laboratory, Cambridge.* F. S. 45

Anthropology. *See also* EGYPT; PHILIPPINE ISLANDS; PHYSICAL ANTHROPOLOGY; PIGMENTATION.

No.

Archæology. Munro. *Archæology and False Antiquities.* O. M. D. 98
Archæology: Method. Rathgen: Auden. *The Preservation of Antiquities.* A. H. CHURCH 77
Archæology. *See also* ART; BRONZE AGE; EGYPT; ENGLAND; FRANCE; ITALY.
Art. Allen. *Celtic Art in Pagan and Christian Times.* B. C. A. WINDLE, F.S.A. 35
Asia. *See* ASSYRIA; INDIA; MALAY; TIBET.
Assyria. Edwards. *The Hammurabi Code.* R. C. T. 78
Assyria. King. *Records of the Reign of Tukulti-Ninib I.* Prof. H. W. HOGG, M.A. 43
Australia. *See* QUEENSLAND.
Bronze Age. Read. *A Guide to the Antiquities of the Bronze Age in the British Museum.* Prof. OSCAR MONTELIUS 7
Egypt. Budge. *Cook's Handbook for Egypt and the Sûdan.* R. W. F. 37
Egypt. Chantre. *Recherches anthropologiques en Egypte.* C. S. M. 71
Egypt: Archæology. Seton-Karr. *Fayoum Flint Implements.* B. C. A. WINDLE, D.SC. F.R.S. 87
Egypt: Craniology. Thomson: MacIver. *The Ancient Races of the Thebaïd.* A. KEITH, M.D. 55
England: Archæology. Mortimer. *Forty Years' Researches in British and Saxon Burial Mounds of East Yorkshire.* R. A. S. 86
England: Institutions. Chadwick. *Studies in Anglo-Saxon Institutions.* H. S. K. ... 49
Europe. *See* ENGLAND; FRANCE; ITALY; PORTUGAL AND SCOTLAND.
Evolution. Ridgeway. *The Origin and Influence of the Thoroughbred Horse.* Prof. T. MCKENNY HUGHES, F.R.S. 106
Fiji. Fison. *Tales from Old Fiji.* (*Illustrated.*) BASIL THOMSON 34
France: Stone Age. Doigneau. *Nos ancêtres primitifs.* R. A. S. 24
India. Holdich. *India.* M. LONGWORTH DAMES 15
Italy. Woltmann. *Die Germanen und die Renaissance in Italien.* JOHN BEDDOE 99
Italy: Archæology. Bicknell. *Further Exploration in the Regions of the Prehistoric Rock-engravings in the Italian Maritime Alps.* J. L. M... 17
Madagascar. Gennep. *Tabou et Totémisme à Madagascar.* N. W. THOMAS, M.A. 36
Malay Peninsula. Martin. *Die Inlandstämme der Malayischen Halbinsel.* C. O. BLAGDEN and W. L. H. DUCKWORTH, M.D., D.Sc. 105
New Zealand. Smith. *Hawaiki: The Original Home of the Maori.* F. W. R. 97
Pacific Islands: New Hebrides. Lamb. *Saints and Savages.* (*Illustrated.*) J. E.-P. ... 85
Pacific. *See also* AFRICA AND OCEANIA; FIJI; NEW ZEALAND; PHILIPPINE ISLANDS.
Philippine Islands. Folkmar. *Album of Philippine Types.* J. GRAY 68
Philippine Islands. Meyer. *Filipino Album, III.* HENRY BALFOUR, M.A. 47
Philippine Islands: Craniology. Koeze. *Crania Ethnica Philippinica. III., IV., V.* Sir WILLIAM TURNER, K.C.B., F.R.S. 44
Physical Anthropology. Duckworth. *Morphology and Anthropology.* F. S. 8
Physical Anthropology. Von Luschan. *Hautfarbentafel.* N. W. THOMAS, M.A. .. 88
Pigmentation. Woodruff. *The Effects of Tropical Light on White Men.* F. S. 69
Portugal and Scotland. Dukinfield-Astley. *Portuguese Parallels to the Clydeside Discoveries.* A. L. L. 101
Psychology. Thomas. *Thought Transference; Crystal Gazing.* T. H. J. 96
Psychology. Ward: Rivers. *The British Journal of Psychology, Vol. I., Pt. III.* N. W. THOMAS, M.A. 70
Queensland: Ethnography. Roth. *Domestic Implements, Arts, and Manufactures.* N. W. T. 16
Religion. Oldham. *The Sun and the Serpent.* W. CROOKE 56
Religion. *See also* MADAGASCAR; VOTIVE OFFERINGS.
Statistics. Davenport. *Statistical Methods.* F. S. 48
Tibet. Waddell. *Lhâsa and its Mysteries: with a Record of the Expedition,* 1903–4. W. CROOKE 63
Totemism. *See* MADAGASCAR.
Tunis. Hamy. *Cités et Nécropoles Berbères de l'Enfida.* A. L. L. 26
Uganda. Cunningham. *Uganda and its Peoples.* Sir H. H. JOHNSTON, G.C.M.G. K.C.B. 33
Votive Offerings. ANDRÉE. *Votive und Weihegaben des Katholischen Volks in Süddeutschland.* R. A. S. 46

PROCEEDINGS OF SOCIETIES.

	No.
British Association for the Advancement of Science	107
London. Anthropological Institute	18

ERRATA.

No. 4, page 9, line 26, for *pirrarru* read *pirrauru*.
No. 28, page 50, line 26, for *throws light on* read *overthrows*.
No. 89, in title of article and of Plate L, for *Bark* read *Palm Frond*.

DESCRIPTION OF THE PLATES.

A.	Bead Necklace from West Africa	With No. 1
B.	Fijian Double-Headed Club...	,, 9
C.	Palæolithic Implements from the Thebaïd	,, 19
D.	Skull prepared for purposes of Sorcery	,, 27
E.	Composite Photographs of the Negroid and Non-Negroid Groups of the Ancient Inhabitants of the Thebaïd	,, 38
F.	Bird and Human Designs from the Solomon Islands	,, 50
G.	Steatite Carving from Mendiland, in the British Museum	,, 57
H.	Model of the Temple of Serabît el Khâdem	,, 64
I–J.	Tunisian Tatu Designs	,, 72
K.	Excavations at Hierakonpolis	,, 79
L.	Painting on Bark from the Aird River. British New Guinea	,, 89
M.	Flints of Eolithic Form produced in the Cement Factory at Mantes...	,, 102

ILLUSTRATIONS IN THE TEXT.

N.B.—All are Photographs, except where otherwise stated.

Orokolo. Semese Mask leaving "Eravo"	With No. 2
Stone Implements from a Bushman's Cave. (Figs. 1, 2, 3.) (*Drawings.*)	,, 5
The Evil Eye and the Camera	,, 6
Orokolo. Procession of Totem Masks	,, 10
Orokolo. Semese Mask and Group of Dancing Girls	,, 10
Masai Ear-ring of Stone. (*Drawing.*)	,, 12
Kikuyu Dancers	,, 14
Egyptian and British Palæoliths compared	,, 19
Implements and worked Morpholith Ring from the Thebaïd	,, 19
"Porobatuna," now in the Sydney Museum	,, 20
Three of the Stones at Agba	,, 23
Samoan Girl dressed for the Club Dance	,, 34
Studies in Bornean Decorative Art. (Figs. 1–4.) (*Drawings.*)	,, 39
Forged Ethnographical Specimen from the New Hebrides. (*Drawing.*)	,, 41
Anthropometric Identification. (*Drawing.*)	,, 52
Tatuing at Hula, British New Guinea. (Figs. 1 and 2.)	,, 53
General view of the Temple, Sarâbit el-Khadm	,, 54
Stele at Sarâbit el-Khadm	,, 54
Angle in the Temple, Sarâbit el-Khadm	,, 54

ILLUSTRATIONS IN THE TEXT—*continued.*

Stelæ and Pillars in the Temple, Sarâbit el-Khadm	With No.	54
Caravan coming up Wadi Sowab, near Sarâbit el-Khadm	„	54
Turquoise Mines and Settlement of Wadi Maghâra	„	54
Steatite Carvings from Sherbro and Mendiland (British Museum)	„	57
Steatite Carving	„	57
Mangaka, Men's Fetish, from Landana	„	59
Kozo, Women's Fetish, from Landana	„	59
Masai drawing Blood from an Ox	„	62
Flints used by Indigenous Turquoise Miners...	„	64
Granite Picks and Crushers used by Egyptians	„	64
Stone Piles and Blocks erected near the Temple	„	64
Corner of Pyramid Base : January 1904	„	66
Western Ambulatory with Ruins of Shrines	„	66
The Rock Salt Pavement	„	66
Sarcophagus of Kauit	„	66
Statue of Usertesen III.	„	66
Tatu in Tunis. (Figs. 9-26.) (*Drawings.*)	„	72
Plan of Camp. (*Drawing.*)	„	74
Pottery Fragments. (*Drawing.*)	„	74
Manner of filing the Teeth, Kwilu River, Congo Free State. (*Drawing.*)	„	75
Professor Adolf Bastian	„	76
Monuments of Social Rank	„	85
Portraits of two Fuegians drawn by S. Parkinson. (*Drawing.*)	„	90
Portrait of a Patagonian, after Wilkes. (*Drawing.*)	„	90
Conical Pot. (*Drawing.*)	„	93
Group of Stones, Port Nolloth. (Figs. 2-3.)	„	93
Flints of Eolithic Form produced in the Cement Factory at Mantes	„	102
The Origin of Eoliths. (Figs. 1-4.)	„	103
The Origin of Eoliths. (Figs. 5-6.) (*Drawings.*)	„	103

LIST OF AUTHORS.

N.B.—The Numbers to which an asterisk is added are those of Reviews of Books.

ABBOTT, W. J. L., 80.

B., E., 84*.
BALFOUR, H., 9, 47*, 50.
BAZLEY, W., 5.
BEDDOE, J., 95, 99*.
BLAGDEN, C. O., 105*.
BOYLE, D., 32.

CHURCH, A. H., 77*.
COLSON, R., 93.
CROOKE, W., 56*, 63.*

DALTON, O. M., 67, 98*.
DAMES, M. L., 15*.
DUCKWORTH, W. L. H., 105*.

EDGE-PARTINGTON, J., 41, 85*.

FELKIN, R. W., 14*, 37*, 100*.

GARSTANG, J., 79.
GRAY, J., 52, 68*.

HADDON, A. C., 22, 39, 53.
HADDON, E. B., 13.
HALL, H. R., 19, 40, 42, 66.
HEARNE, G. R., 83.
HOBLEY, C. W., 21.
HOGG, A. J., 3.
HOGG, H. W., 43*.
HOLLIS, A. C., 12.
HOLMES, J. H., 2, 10.
HUGHES, T. McK., 106*.

J., T. H., 96*.
JANSCHUL, Prof., 11.
JOHNSTON, SIR H., 23*, 33*.
JOYCE, T. A., 57.

K., H. S., 49*.
KEITH, A., 55*.
KENDALL, H. G. O., 91.

L., A. L., 26*, 101*.
LANG, A., 4, 31.
LARKBY, J. R., 92.

M., C. S., 71*.
MONTELIUS, O., 7*.
MULLEN, B. H., 59.
MYRES, J. L., 6, 17*.

OBERMAIER, H., 102.

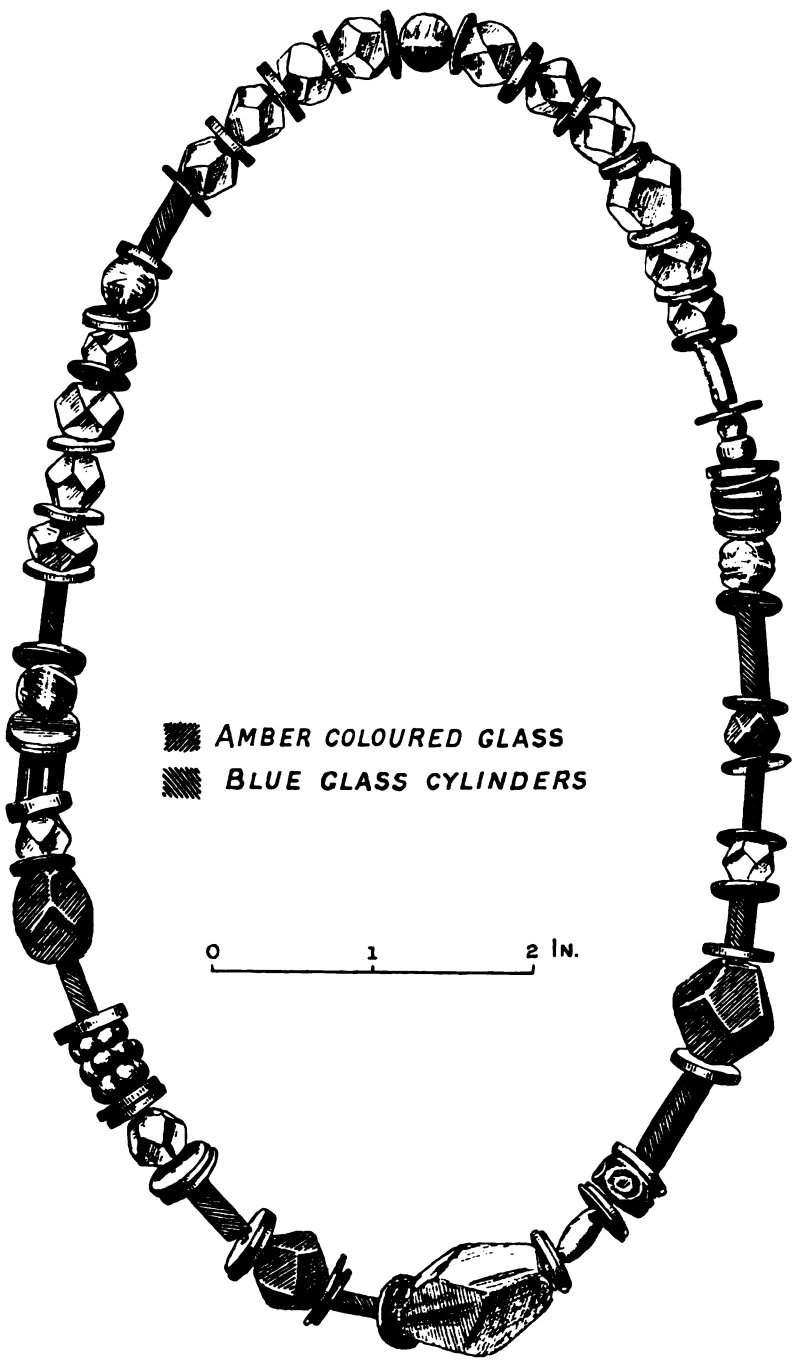
PEARSON, K., 65.
PETRIE, W. M. F., 64, 104.
POCOCK, W. I., 81.

R., F. W., 97*.
READ, C. H., 1, 30.
ROTH, H. L., 72, 90.

S., F., 8*, 45*, 48*, 69*.
S., R. A., 24*, 46*, 86*.
SALKELD, R. E., 94.
SADLEIR, C. A., 60.
SELIGMANN, C. G., 27, 29, 89.

THOMAS, N. W., 11, 16*, 25*, 28, 36*, 60, 70*, 82, 88*.
THOMPSON, R. C., 54, 73, 78*.
THOMSON, A., 38, 58.
THOMSON, B., 34*.
TORDAY, E., 75
TURNER, Sir W., 44*.
TYLOR, E. B., 76.

WARREN, S. H., 103.
WERNER, A., 62*.
WHITE, F., 61*.
WINDLE, B. C. A., 35*, 74, 87*.
WOODFORD, C. M., 20.



A BEAD NECKLACE FROM WEST AFRICA.

MAN

A MONTHLY RECORD OF ANTHROPOLOGICAL SCIENCE.

PUBLISHED UNDER THE DIRECTION OF

THE ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.

N.B.—All communications printed in MAN *are signed or initialled by their authors, and the Council of the Institute desires it to be understood that in giving publicity to them it accepts no responsibility for the opinions or statements expressed.*

N.B.—MAN, 1905, *consists of* (a) *twelve monthly-published sheets, of sixteen pages each, printed in single column; containing "Original Articles" and substantial "Reviews" of recent publications; all numbered consecutively* 1, 2, 3, *onwards.*

N.B. — Articles published in MAN *should be quoted by the year, and the reference-number of the article, not by the page-reference;* e.g., *the article which begins on p.* 6 *below should be quoted as* MAN, 1905. 3.

ORIGINAL ARTICLES.

Africa, West. With Plate A. Read.

A Necklace of Glass Beads from West Africa.

By C. H. Read, F.S.A.

1

A great deal has been written on the subject of glass beads discovered in the earth in various parts of West Africa, and not infrequently claims for a very high antiquity are put forward, more particularly when the so-called "aggry" beads are in question. Such claims are found to rest on very slender foundations, evidence of any kind being entirely absent, and an examination of the beads themselves showing no features that are not to be found in mediæval or later beads from the factories in Venice.*

I have never yet been able to get a satisfactory answer to the enquiry, "What is an aggry bead?" I am told that it must show obvious signs of age, and that the pattern must not be superficial, but as a definition this is clearly of little value. The so-called "chevron" bead has been called the aggry bead, but it is by no means commonly found in West Africa, though it does occur there, as well as in American Indian graves. In no case known to me has any bead, or group of beads, been discovered in West Africa that would pass muster as of greater age than mediæval times, and in addition they are generally of Venetian patterns. Such being the case, I was keenly interested in the necklace of glass beads shown in the plate, for the bulk of them are of a type and quality of the material rather pointing to a tomb in the Greek islands than to that of a negro chief.

The necklace was presented to the British Museum by Mr. L. P. Davies, and he obtained it from the grave of "a renowned chief" at Mansu, a town on the route from Elmina to Kumasi. It consists of about twenty beads of crystalline glass, irregularly facetted, four of amber-coloured glass of the same make, one bead of crystalline glass moulded like a mulberry, nine cylinders of a dull light-blue glass, two cylinders of apparently a milk-white opaque glass, two sections of "canes" of glass, one of them with red, white, and green bands, the other with a blue ground and white inlay, and one

* *Journ. Anthr. Inst.*, XII., p. 64; *Archæologia*, XLV., p. 297.

or two other types. As strung at present these beads alternate with circular discs of white shell, carefully finished, their external surfaces being apparently all polished.

Both the shell and the beads are, however, considerably changed by long burial. The beads are in all cases in a state of iridescent decay, the surfaces being in many cases deeply pitted and presenting exactly the same appearance as beads of the same kind from the Mediterranean area. Superficially, in fact, the crystalline glass in this necklace is identical in appearance with those from the tombs at Camirus in Rhodes, dating from the sixth century. Without insisting too strongly on this point, it is at least worthy of note that we have here glass beads of classical style found for the first time in West Africa, and presenting features that in point of date may justifiably be associated with the name and time of the Carthaginian Hanno, a name often invoked when objects of indeterminate age are found on the African coast. One technical point may be of interest, viz., all the crystalline glass beads are clearly made on a mandril, while the blue cylinders are as evidently sections of canes. Theories have been formulated with regard to these two methods of making beads which may or may not have solid value. Beads are so eminently portable, so attractive to primitive peoples and so enduring, that they form a very unsafe foundation for theories of direct trade relations. But assuming the accuracy of the story of the finding of those now in question, which I have no reason to doubt, they certainly provide a new datum in the story of West Africa.

C. H. READ.

New Guinea: Totemism: Sociology. Holmes.

Introductory Notes to a Study of the Totemism of the Elema Tribes, Papuan Gulf. *By the Reverend J. H. Holmes, Local Correspondent of the Anthropological Institute.* 2

That a phase of totemism still exists among these tribes subsequent statements will prove; whether it be a degenerate form of an old-time, highly-developed cult, or whether it be still in the course of evolution, students acquainted with the cult in its many phases among other races must determine; that the totemism of these tribes may be regarded as a cult will be evident as we proceed, and, as such, it has a far reaching influence on the social and moral life of the Elema tribes.

Tribal Organisation.—As each community is built up of the units of related and co-related members of many families, likewise, each tribe is a segregation of related and co-related communities. Such a process of tribal construction is inevitably conservative, and proves the truest safeguard in the maintenance of the tribe, as a unit, among alien or kindred tribes. The social organisation of these tribes must be regarded as an elaborately evolved system (not as an irrational institution), which duly recognises the rights of property, the privileges of birth, and the claims of the brave and strong. It is based on sound tenets; it insists on the observance of these tenets and a breach of the same has its penalty, either in ostracism or in payment.

The senior male member of a family is regarded by his family, by his community—which may have many sub-families—and by other communities of his tribe, as the representative of his particular family in all matters affecting the interests of his tribe. In large communities, having many families, there may be as many men regarded as the heads of their respective families but these are not all regarded as representatives of their respective families in tribal matters, as each tribe has its chief, so each community has its head and in all matters of tribal importance he represents his community.

The representative head man of a family is known as "papuvita," the representative head of a community is a "pukari" (chief), *i.e.*, he is chief to his community but regarded as sub-chief by the tribe as a whole, and, like the "papuvita," at certain periods presents a portion of food to the tribal chief. Invariably the chief of a community is

the largest landowner of his community, but he is not so in virtue of his social position as chief. All property in land and its indigenous products is inherited; personal effects, as weapons, tools, cooking utensils, and articles of adornment, may be inherited, purchased, or made.

Because a man is a large landowner, that in itself does not give him the social position of communal chief, it is his birthright by the same law of descent which constitutes another man tribal chief.

It is inevitable, with a system of communities thus constituted, that each chief must have a considerable amount of responsibility in all matters which concern the interests of the tribe, but in no way can he dominate over the decisions of the tribal chief. The latter, like the former, is chief of his tribe by birthright, but his word is final in all important tribal business by common consent, on the assumed, if not expressed, idea that he is also tribal chief by supernatural or, to modernise, divine appointment. The tribal chief may, or may not, belong to the largest community of his tribe, but he is invariably hereditary chief, unless the line of succession has been broken, either by death, or by physical incompetency to fulfil his duty as chief to the tribe. When a chief dies without male issue, or resigns his chieftainship of his tribe on account of old age and debility, his successor is appointed by him alone, and his choice generally transfers the honour to a male member of his fraternal kin.

FIG. 1.—OROKOLO. SEMESE MASK, LEAVING "ERAVO."

An introductory survey of the social constitution of an Elema tribe is not complete without a reference to the club (eravo), or, to name the same more correctly, the totem temple. To the casual observer the "eravo" is merely an accommodation house for the male members of the tribe,* to the initiated native it is a building having many sacred associations; it is the repository of a vast variety of objects, representing to him his tribal, communal, and individual totems, "ualare,"† in effigy or carving on shields or prows, masks or floor; the pageantries of tribal festivals are all rehearsed in "eravo"; the masks worn on special festive occasions are made in the "eravo," and no uninitiated member of the tribe must enter to see them and will not dare to criticise them unfavourably when they are paraded in public because—as the children are told—they are gods.

The fully initiated native regards his "eravo" as his alma mater; all he knows of the past history of his tribe; his knowledge of his duties and obligations to his tribe

* *Cf. Journ. Anthr. Inst.*, XXXII., p. 419. † *Ibid.*, p. 426.

and community; his reverence for all and everything sacred to his tribe and community; his contempt and dislike for all and everything opposed to the interests of his tribe and community; in brief, all that he is he owes to his "eravo," and the teaching he received in it during his initiation will dominate his actions through life.

TRIBAL MARRIAGE LAWS.—(1) (*a*) (*Toiripi*).—A man must marry a woman of another communal totem family.

(*b*) (*Morea-ipi.*)—A man may marry a woman of his communal totem family, but not a woman having the same totem object as her individual totem. On the other hand, he is free to marry a woman of another communal totem family having the same totem object as her individual totem.

(2) A man must marry within his tribe; failing to do this, he must observe the following law.

(3) The laws of marriage relating to totem kinship that are recognised by his tribe must be observed by a man who marries without his tribe.

(4) A man who marries without his tribe, but duly observes the law of totem kinship, may bring his wife to live with his tribe, but she continues to be a member of her maternal totem family. A deliberate violation of the above laws ostracises a man from his tribe, and gives him no social position in the tribe of his adoption, although he may be admitted into her family and share, in a limited sense, in the communal life of her male kin. Very rarely does it happen that a man is so foolish as to disregard the laws of marriage of his tribe, but when it does happen, the individual is so completely ostracised by his tribe that he is no longer regarded as having once belonged to the tribe. His land-property and its products are confiscated by his male kin, but if he felt brave enough to risk a quarrel with them, the terrors of sorcery are more than enough to keep him away from his tribe.

It is doubtful if the foregoing marriage laws are binding on either sex of illegitimate birth. Illegitimacy is so comparatively rare among the Elema tribes, and held in such contempt, that it is difficult to get definite information on this detail. Personal observation is, in a matter of this kind, very restricted, as the native never seems inclined to confirm or negative one's observations, but gets away from the topic as if it is disagreeable to him. It is probably safe to infer that neither sex of illegitimate birth can marry into a totem family and be regarded as a member of it in the same sense as individuals of legitimate birth.

It seems that the grades of social position are in some way determined by the totemism of the respective tribes; be that as it may, it is rarely that a boy of illegitimate birth is initiated, and that in itself debars him from having any status in his tribe, as it prohibits him from taking any representative part in tribal celebrations.

Enough has been stated to show that the totemism of these tribes has a far-reaching, restrictive, and preventive influence on the social life of the tribes; the former, in that it imposes such conditions of marriage that it is felt undesirable to marry without the tribe; the latter, in that it minimises the possibility of land ownership being transferred from one tribe to a kindred or alien tribe.

LAND TENURE.—The land tenures of each tribe may, for present convenience, be defined as follows:—

(1) *Tribal Territory.*—Each tribe has its own territory; the same has well-defined boundaries, which are in the main duly respected by kindred and alien tribes. The right of ownership of these areas is, in nearly every case, based on the assumption that the ancestors of the respective tribes received these areas as free gifts from a guardian spirit or god, or secured the same by conquest, which constitutes equally legal rights of possession. In either case, *i.e.*, be the right of possession based on the claim of free gift or of conquest, the guardian deity who made the gift to a particular tribe, or the

original ancestor who made the conquest, each is regarded as the tribal deity of the respective tribes, whose territorial claims rest on the above assumptions.

(2) *Communal Territory.*—Each tribal territory is divided into communal areas, according to the number of communities of the respective tribes. Many communities claim to have received their land areas direct from an ancestor of supernatural origin whom they reverence to-day as a deity ; other communities, who belong to the maternal totem kin, assert that their most remote ancestor became acquainted with a female deity, and she endowed him with supernatural powers that he was able to create coconuts, sago, betel nuts, and many other things ; this he did on certain plots of land and gave the same to his posterity.

(3) *Personal Territory.*—Communal gardens are divided and sub-divided into allotments and each adult male member of the community has a plot, varying in size according to his social position in the community. We are unable to say with our present knowledge if a man's personal totem affects his social position in his community ; it may do so but we have no definite information to give on this detail.

Individual Rights.—It is difficult to determine how the children of legitimate marriage are regarded in relation to the totemism of these tribes ; the probability is, that the children born to parents of the maternal totem kin are members of that totem kin and remain so permanently, but among those families who claim to be members of a paternal totem kin it seems to be left to individual choice of the male children ; *i.e.*, a boy, during the period of his initiation, can decide if he will be regarded as a member of the paternal totem kin, or if he wishes to be identified with the maternal totem kin of his mother. This seems to suggest that the females of these tribes have no choice ; very probably they are supposed to be born into the maternal totem kin and continue to be associated with it through life.

It is when reaching this stage in our study of the totemism of these tribes that seeming confusion sets in and the writer seems quite unable to express those ideas which are not a little embarrassing to the native. It may be premature to suggest that there are indications of their phase of totemism having reached a stage of transition from the matriarchal to the patriarchal stage, but it does seem as if the transition is still going on, as such communities as belong to the matriarchal stage are, so far as our present research takes us, a conspicuous minority.

All children of legitimate birth, male and female, have as their birthright the protection of the tribal totem, and are identified as having been born into the totem kin of the respective communities of their parents, but it must be recognised that each individual has his, or her, individual totem object, not necessarily that of the father, or mother, although it may be that the male child has his father's totem object as his individual totem object ; or, the girl has and reveres the same object as her individual totem object as her mother.

It is important to note here, however, that the individual gets his, or her, individual totem object from the person, living or dead—usually a relative—after whom he, or she, is named. Children are sometimes given names of foreigners who reside among them for any length of time, always with a view of frequent presents to the child from the foreigner thus honoured, but careful inquiry will prove that a child thus named has also his native name, and by this name is known in all important tribal matters in which he may ultimately be concerned. A man is not named after his totem object, but he claims as his totem object the totem object of the man after whom he is named.

To summarise the foregoing we can say, a boy born in the Morea-ipi tribe has as his tribal totem Iva,* the god who became a man and created many good things ; he may belong to the coconut community of Kaiva, a patriarchal totem, also a deity but

* *Cf. Journ. Anthr. Inst.*, XXXII., p. 425 ; XXXIII., p. 126. (Ivu is a misprint for Iva.)

the original ancestor of the community which bears his name; he also has the animal, bird, fish, or tree, as his individual totem which his relative after whom he is named had, or has.

Individual rights in land property, or products of the same, are such as are inherited at birth, or cultivated by personal effort. Priority of birth has full significance in the distribution of property, but if a man dies without issue, his communal land rights are claimed by his male kin.

The foregoing notes indicate conclusively that the phase of totemism recognised in Elema has a marked influence on the social life of these tribes: it preserves the entity of the tribe and thus avoids a detrimental merging into other tribes; it neutralises the possibility of the transference of ownership of land and stationary property, as coconut and sago plantations, to kindred or alien tribes, but we have yet to observe its influence on the moral life of the Elema tribes.

Tribal Obligations.—Totem kinship has a greater influence on the moral life of the Elema tribes than the relationship of husband and wife, or, that of parents and children. It fosters fidelity in family life, fellowship in communal life, and loyalty in all things sacred to the highest and best interests of the tribe. This tends to peace among the respective communities of the tribe and minimises the possibility of frequent splits from the tribe. Quarrels are not unknown, but are rarely allowed to develop into serious dimensions; such quarrels may lead to fighting with bows and arrows and a loss of life, but totem kinship saves a tribe from annihilating itself, or even reducing its numerical strength very perceptibly. Such fighting is regarded as a family quarrel and known by a distinctive name as such.

The terms "relative" and "neighbour" are synonymous in the respective dialects of the Elema group of tribes; blood relatives and neighbours are all known by a common term, and their totem kinship is of the first importance.

Shallow as may be the affections of husband and wife for one another; superficial as may be the love of parents and children for one another, their loyalty to the members of their respective totem kin cannot be questioned, and no duty imposed by the laws associated with their totemism is allowed to pass unfulfilled. But this loyalty and devotion so spontaneously rendered to one another of the respective totem kin—not necessarily to members of totem kin of kindred tribes—is only secondary in importance to the ever manifest reverence for the tribal totems, as distinguished from communal and individual totems.

J. H. HOLMES.

Flint Implements. Hogg.

The Patination of Flint Implements. *By A. J. Hogg.*

3

The subject of the patination of the surface of flint implements is one of importance both to the implement-hunter and the geologist; and, as it seems just now to be exciting considerable interest, perhaps a few notes on the process may be of use in helping to elucidate the manner in which this patination takes place.

Sir John Evans in his *Ancient Stone Implements* quotes M. Moilliet as stating that flint is of two kinds, viz.:—I. White, and insoluble in water; II. Black, transparent, horny, and soluble in water.

The more recent researches of Mr. B. C. Polkinghorne have led him to suggest that a homogeneous black flint consists of four-fifths or five-sixths of anhydrous silica, and a fifth or sixth of hydrated or colloidal silica.

Flints, then, as we know them, are composed of a mixture of the two kinds: the one crystalline and insoluble, the other amorphous and soluble.

The amorphous silica, having been dissolved out from the surface of the flint as a colloid, is capable, under favourable conditions, of being redeposited in a vitreous form, and is then insoluble in water. Hence, the enduring quality of the brilliant spots and

patches which make their appearance on Neolithic implements, and are the first visible signs of decay.

With these the slow process of the disintegration of the flint commences: the surface becomes smooth to the touch, veins and patches of opaque white spread by slow degrees over the whole, and the surface then assumes the glazed aspect of porcelain. After a long period of time the glaze also disappears, and the surface becomes rough.

These changes are caused by the action of rain-water charged with a certain amount of carbonic acid, and are most rapid on chalky soils, especially where the chalk comes near the surface.

Where, however, implements are buried in other than chalky drifts, or are protected by position from rainfall, little appreciable change takes place in their condition; so that two implements of the same age, one from the surface and the other from a few feet below it, might in many cases be taken to belong to widely different periods. As a rule it may safely be asserted that implements buried in drift remain in much the same condition as they were at the time of their entombment.

There are now in the British Museum some implements from Knowle in Wiltshire, recently added to the national collection, which, by the kindness of the authorities, I was lately afforded an opportunity of examining. These are especially interesting from the unusual condition of surface which they display, arising from what at first sight appears to be a brilliant vitreous glaze.

A cursory inspection did not enable me to form a satisfactory opinion as to the cause of this appearance; but a friend having since sent me for examination a characteristic specimen of these flints, I have arrived at what appears to me a solution of the question.

By careful scrutiny under a glass of moderate power, the brilliancy is shown to be the result not of the addition of a glaze but of a high polish. The slight asperities of the surface are worn down, not coated over; showing that the glassy polish prevailing over the entire surface of this specimen is due to attrition only. The conclusion that I should come to is, therefore, that the polish was affected by the operation of sand in running water; just as in the Egyptian desert stones are polished by the impact of grains of sand borne along in clouds on the wind. I have seen no mention of the conditions under which these flints are found, but should regard it as tolerably certain that they come from a bed of sand, or sandy gravel, which once formed part of the bed of a river, and by continual movement would produce the polished surface which in these implements is so marked a feature.

A. J. HOGG.

Anthropology. Lang.

Misgivings of an Anthropologist. *By Andrew Lang.*

In studying lately the subject of totemism, I have been led to the conclusion **4** that certain opinions may be misdoubted as possibly fallacious. That I may be corrected if my own logic is astray, I venture to offer a few examples.

1. As long as we believe that, in the dawn of totemistic society, descent was reckoned in the female line it is a fallacy to suggest that the hereditary totem and totem name originated in anything connected with the individual male.

Dr. Fison wrote in 1880, "The Australian divisions show that the totem is, in the "first place, the badge of a group, not of an individual. . . . . And, even if it "were first given to an individual, his family, *i.e*, his children, could not inherit it "from him."*

This has always been obvious, yet most theories of the origin of totemism start from the *yunbeai*, *nagual*, *nyarong*, or otherwise named animal or plant "familiar,"

* *Kamilaroi and Kurnai*, p. 168.

or fetish, of an individual male, by him bequeathed to his children—which is impossible —with female descent.

If I do not misunderstand Dr. Howitt, he may have slipped into this fallacy. He writes, in agreement with myself, that "the assumption by men of the names of objects "must, in fact, have been the commencement of totemism." Regarding my theory of the mode of acquiring such names as "most improbable," Dr. Howitt goes on, "I could "more easily imagine that these early savages might, through dreams, have developed "the idea of relationships with animals, or even with plants." He cites a case of a man who, having dreamed that he was a Lace Lizard, believed that he *was* one. But if Dr. Howitt means that kins inheriting the Lace Lizard name and totem might thus arise, he forgets that, under a system of female descent, the theory is impossible, unless the man's *sisters* adopted and transmitted the Lace Lizard name. With this custom, in practice, we are not acquainted.*

2. The idea that the totem kins in the phratry or primary exogamous moiety have been formed by scission, or splitting off from the phratry, was advocated long ago by Mr. J. G. Frazer, though if he now regards totem kins as, in origin, magical co-operative societies, he has probably altered his opinion. It still appears to be that of Dr. Durkheim, who cites Mr. Frazer's *Totemism* (pp. 62–64, 1887).

Given that the "clan," or totem kin with exogamy and female descent, is being spoken of, the supposed process is impossible.

Thus take the Mohegan Turtle phratry. It contains totem kins, Little Turtle, Mud Turtle, Great Turtle, and others. Mr. Frazer (in 1887) wrote, "Here we are "almost forced to conclude that the Turtle phratry was originally a Turtle clan, which "subdivided into a number of clans, each of which took the name of a particular kind "of Turtle."

This could not occur with exogamy and female descent. If there were originally but two "clans," say Wolf and Turtle, every fire-circle would contain both Wolf and Turtle members, granting exogamy, and female descent. Every party which went forth from the territory occupied by the *tribe* (the "clan" could have none) would consist of Wolves *and* Turtles. We cannot conceive the scission of itself by an exogamous "clan" with female descent, for such a "clan" only exists in a scattered and interblended condition, with members of other "clans" inextricably bound up with it, and it has not, and cannot have, any territorial limit to desert, thereafter forming one new "clan" with one new name and totem.

As a matter of fact, animals of the same species, as black and white cockatoo, are usually found in opposite phratries, not in the same, of which Mr. Frazer gives examples, *e.g.*, in *Totemism*, pp. 65–69. Several other cases are known.

3. As an exogamous clan with female descent can confessedly have no "territorial basis," Dr. Durkheim's theory that "sub-classes" or "matrimonial classes" arose from the distinction between members of a "clan" born in their own territory and members born in the territory of the "clan" whose name they do not bear cannot be accepted. Clans with female descent and exogamy have, and can have, no such territories, and there must be some other origin of "matrimonial classes." (Durkheim, *L'Année Sociologique*, I., pp. 16-22.)

4. It appears to me to be a fallacy to argue that the *churinga nanja* belief of the Arunta (which allots totems by the accident of the place of a child's conception, and so makes them non-exogamous) has been a creed, and has involved a social system through which Australian tribes north of the Kaitish have passed. (*Northern Tribes of Central Australia*, p. 281.)

If that were the case, which Messrs. Spencer and Gillen think "the only possible conclusion," then totems among the northern tribes would still be non-exogamous, as

* *Natives of South-East Australia*, 153, 154.

among the Arunta. As among the Arunta, the totem, by dint of the *churinga nanja* belief, would have got into both exogamous moieties, and any man could marry a woman of his own totem, if she were in the right class. This would still occur, because—the totems once "in the wrong class"—how could they get out again? Only by a redistribution of totems, which, if ever made, has been made (supposing the Arunta plan to be "the most primitive") by every totemic society in the world, except the Arunta "nation" alone. This is not easily thinkable, and could not be proved, even if those *churinga nanja*, with the belief in them (which cause the Arunta anomaly), were everywhere found in the lands of all other tribes. But they are only found in the Arunta area and in the tribe nearest to the Arunta. For the stone *churinga*, if they existed on the soil, might be obsolete amulets to which the Arunta have attached a new meaning of their own invention.

5. Several fallacies seem to attach to the word "group." By "group," I think, should naturally be understood a set or knot of persons dwelling in local contiguity. But the word, when students talk of "group-marriage," does not mean this, it means *status*. The theory is that all persons *noa* (*u-nawa*, clearly the same word), or legally intermarriageable, were once, or are now, actually married to each other. But *noa* may be, and are, scattered through "nations" of wide territory. They do not, in any sense, form a "group."

6. At present, we are told, there is "group marriage" among the Urabunna, Dieri, and other tribes with the *Matteri-kiraru*, phratry names. But this is, in my humble opinion, a misuse of words. All *noa* are in no sense wedded to all other *noa*, but out of all *noa* the tribe may select this or the other man to be the legal paramour, under restrictions, of this or the other woman (herself similarly attached to yet other men), who is Tippa malku, or "specialised" from infancy, to one individual man. Some of these *pirrarru*, or legalised and limited paramours, may live together as a "group," others may meet "seldom or never," after the feast in which the *Kandri* ceremony was performed.

All this does not constitute "group marriage." It is a legalisation of limited paramourship between persons of a certain *status* (*noa*), not a wedding of all males in a group to all females in the same group. It is only found in tribes of a peculiar and intermediate character, as regards social organisation and ceremonial institutions.

7. It seems to be a fallacy to recognise the promiscuity of feasts of licence as a "survival" of "group marriage," and then to infer the past prevalence of "group marriage" from the promiscuity of the feasts of licence. For that this promiscuity is such a survival has not been proved, and another explanation is obvious.

8. If not a fallacy, it is a hard saying that the differences between the beliefs and customs of the Dieri and Arunta "are such as to quite preclude the possibility of one "having borrowed ideas from the other."* For the northern Urabunna, having no *churinga* of their own, "actually borrow some of those from the southern Arunta" for their initiations.† If they borrow peculiarly sacred objects, what may they not borrow, modifying the ideas to taste?

9. It seems less than logical to attest that "the savage Australian, it may "indeed be said with truth, has no idea of relationships as we understand them," and then to assert that he *has*, as, for example, when "blood brothers" are forbidden to share in the marriage doings of *jus primæ noctis*.‡ The discrimination is obvious and undeniable, as I venture to think. A "brother in blood" is discriminated from men who are only of his tribal *status*, who, again, could only be recognised as such after the tribe was organised.

* *Northern Tribes*, p. 284. † *Ibid.*, p. 258. ‡ *Ibid.*, pp. 95, 134, 135.

10. Finally, is it logical to suppose that the tribe of to-day, with its "ceremonial gatherings," "assembled headmen," and medicine man, believing himself to receive laws from Daramulun or Bunjil, was already extant, and organised, and capable of legislation, when exogamy was for the first time introduced (on the hypothesis of Dr. Howitt) by an inspired medicine man, who first laid his idea before the "assembled headmen," who then promulgated it to the "tribes-people," who passed the Bill?* This idea seems to me to involve the large assumption that the tribe of to-day was in existence before the laws which appear to make its existence probable. On many other points, accepted by eminent authorities, I have searchings of heart, but it will greatly assist my contemplations if my doubts as to these ten positions can be removed.

ANDREW LANG.

Africa, East. Bazley.

Exploration of a Bushman's Cave in Alfred County, Natal. 5

Report to H. Higgs by William Bazley. Communicated by C. H. Read, F.S.A.

This cave, as you will remember, is 120 feet long by 20 feet wide; it is, in fact, more a rock shelter than a cave. You will also remember that the floor was covered with soft dusty soil. I first sunk several pits to ascertain the depth of the soil covering the floor of the cave.

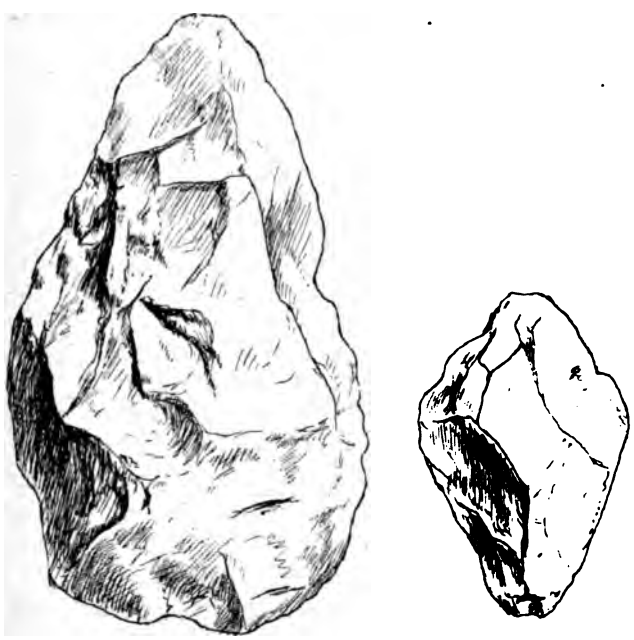


FIG. 1 ½ SCALE.

First I found a stratum of soft soil 3 feet 4 inches deep; in some of the pits it was even 4 feet deep, but nowhere was it less than 3 feet deep. I next came on harder or more compact soil, containing layers of ashes and wood charcoal, with burnt and human bones. From the way the skulls had been broken up I should say that the place had been occupied by cannibals. This stratum was about 4 feet thick. Below this I came on a lot of loose stones, which seemed to have been placed there by hand, because there were no large stones among them. This layer was about 1 foot 6 inches thick and covered the whole extent of the cave floor. Nowhere was it less than 14 inches thick, and from the size of the stones and the regularity of placing it must have been the work of human beings.

Below this layer of stones I found good hard firm soil, which came out in lumps and had to be broken up before it could be screened or put through the sieves. In this stratum I began to find cores, flint flakes and other stone implements with grinding stones and stone hammers. This stratum was in places 3 feet thick. I next hit what I thought was the bottom of the cave and began working its whole extent. But I then found that what I had supposed to be the floor of the cave was formed by large slabs of

---

* *Natives of South-East Australia*, pp. 89-90.

fallen rock from the roof. One of these slabs was 16 feet long, 9 feet wide at one end and 5 feet wide at the other, and averaged 2 feet thick. On sinking down between these I found a depth of very hard soil, averaging 5 feet thick. Here I found many scrapers, stone hammers, &c., also stones with holes drilled through them, and many cores, chips, and flakes. I therefore decided to split up and remove these slabs of stone. This I did with plugs and feathers as I dare not blast or use explosives. This work took four days to accomplish. When the largest slab was removed I found three skeletons lying side by side, all crushed flat and every skull flattened out. I was able, however, to measure the height of each. The largest measured 4 feet 7 inches, the other 4 feet 3 inches, and the smallest nearly 3 feet, or as near as I could get it, 2 feet 11 inches, and must have been a child. It lay between the two larger skeletons. The bones crumbled to mouldy earth when I attempted to remove them, and I only secured some of the teeth and bits of the arm-bones.

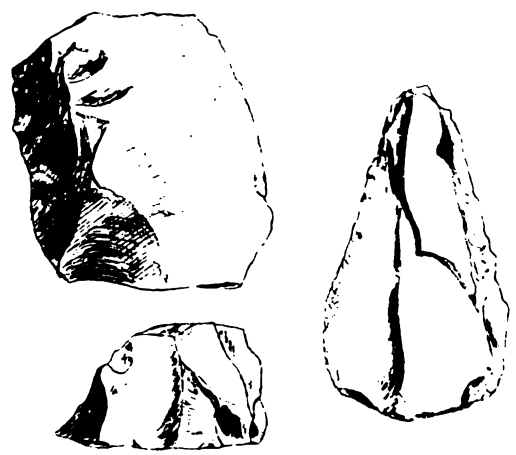


FIG. 2. ¼ SCALE.

At this level, say 16 feet below the floor as you saw it, I found thousands of scrapers of all sizes, some not larger than a finger nail, also cores, chips, and flakes, by the cartload, with a few arrow-heads and knives, but mostly broken. I have sent you and the curator of the museum a sample of these scrapers, &c. I found no heavy tongue-shaped implements like the large axe sent, which was found in another district, many miles away (Fig. 1). I expected to find many more arrow-heads than I did, but my experience is that perfect arrow-heads are not often found, and when found are mostly on the hilltops in the gravel seam that lies about 2 to 3 feet below the top soil. I know of several places where stone implements have been manufactured, as can be seen by the quantity of spoils and chips and broken implements; but even in such places perfect implements or arrow-heads are not often found. Sometimes in making a road I have come across a light mould, in which I have found as many as fifty nice arrow-heads, showing that some large animal, such as an elephant, had been killed. But when one considers how few bullets are found on battlefields where tons of ammunition have been expended, it is not surprising that so few arrow-heads should be found, though the numbers of cores and flakes show that hundreds of tons of stone have been broken up to procure flakes from which to make arrow-heads and scrapers, &c. I am about to work two other caves, so if you care for a report on them I will send one.

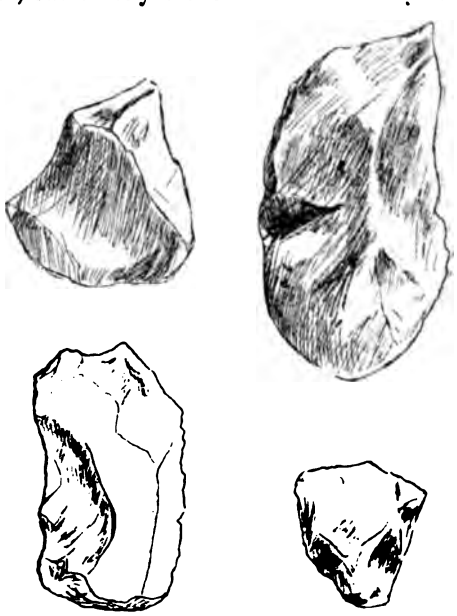


FIG. 3. ¼ SCALE.

WILLIAM BAZLEY.

Magic. Myres.

The Evil Eye and the Camera. *By John L. Myres, M.A., F.S.A.* 6

The photograph which is reproduced in the block was taken by Mr. T. Ashby some years ago, and was given to me by Mr. F. Haverfield, of Christ Church. It represents some small Italian boys who have been induced, much against their will, to stand against a fragment of early masonry at Segni (*Signia*) "to show the scale." All the boys except one have carried their aversion so far as to wriggle while the lens was uncovered, and so have escaped identification. The reason for their reluctance may easily be conjectured, but is fortunately expressed most graphically by the proceedings of the one boy among them whose features are to be distinguished clearly. This little fellow has had a brilliant idea. If the camera has merely got the "evil eye," the charm which will stop the *gettatura* will surely repel the assaults of the photographer. So he displays in front of him the familiar gesture of two extended fingers, and thus impenetrably armed stands steadily up to be shot at.

JOHN L. MYRES.

REVIEWS.

Bronze Age. Read.

British Museum: A Guide to the Antiquities of the Bronze Age in the Department of British and Mediæval Antiquities. With 10 plates and 148 illustrations. London: Printed by order of the Trustees, 1904. Pp. xii+159. 22×13 cm. Price 1*s*. 7

This guide—its preface is signed by Charles H. Read—is a very useful book, as the antiquities from the Bronze Age preserved in the British Museum are very important. Not all of them are kept in the Department of British Antiquities. In the Third Egyptian Room, in the Assyrian Room, and in the Greek Department are to be seen many bronzes, vases, and other objects of that period from Egypt and Cyprus, and from Rhodes and Greece; the Mycenæan period and all the periods in Egypt up to the beginning of the New Empire being pure Bronze Age.

The Bronze Age is the period in the history of a country during which bronze is used for weapons and implements, iron being unknown or still rare. But the level of the civilisation during the Bronze Age can be very different. In Chaldæa and Egypt, in Crete and the Peloponnesus, many centuries of Bronze Age without any knowledge of iron represent a civilisation of an astonishing height—as in Mexico at the arrival of Cortes.

In the Department of British Antiquities there is a rich collection of antiquities from the Bronze Age found in England and in many other countries. The English finds are, of course, the most interesting for the scholar. We go to Edinburgh for the Scotch and to Dublin for the Irish bronzes—the archæological museums of both cities being very

rich in national antiquities—but for the English bronzes we go to London, where we find a most valuable collection in the British Museum.

Many English bronzes have been illustrated by Sir Richard Colt Hoare, Dr. Thurnam, Canon Greenwell, Sir John Evans, and others, and the new guide gives us an excellent description of all these things.

In 1900 I had the pleasure to treat the British Bronze Age in my lectures at the University College. I pointed out that we can in England, as in other countries, speak of several succeeding periods in the Bronze Age, and I demonstrated the types characteristic of each period. Bronze was known in England about 2000 years B.C.—copper had then been used there for a long time—and the Bronze Age ended in that country about the eighth century B.C. Iron and steel, that since have been of such enormous importance to English industry, were not used in the British Isles ten centuries before Cæsar.

Bronze was not invented in England, but most of the bronze used in Great Britain and Ireland was made of indigenous metals; it was not imported as in Scandinavia. The British mines have produced much copper and tin in the Bronze Age. Because tin was indispensable for the fabrication of bronze and so much tin was produced in England, that country was already of great commercial importance in the Bronze Age.

Besides the English antiquities from this period the British Department of the Museum possesses many bronzes found in Scotland and Ireland, in France and Germany, in Italy and Greece, and other countries. I can mention here only those from Neuenheiligen in Germany, El Argar in Spain, Tell Sifr in Mesopotamia, and Gungeria in Central India.

As England was rich in tin, Ireland was rich in gold. Irish gold was exported, even in the Bronze Age, to Great Britain, France, and Scandinavia, as many Irish gold ornaments found in those countries prove. A beautiful crescent-shaped collar of gold of the Bronze Age found in the north-western part of Wales can be seen in the Gold Ornament Room of the British Museum. It is undoubtedly of Irish origin and has been figured in the Guide (p. 145).

Some of the most important questions about the Bronze Age are discussed in the Guide.

It is true that "metallurgists have pointed out that there is no reason in the nature "of things why iron should not have first attracted some inventive genius at the close "of the neolithic age. Its ores are more abundant and more easily reduced than any "others, while in its meteoric form it requires no reduction at all." But the priority of bronze or iron in the history of mankind is not a metallurgic question. It is an archæological question. And the archæological facts prove indisputably that the use of bronze is much older than the use of iron.

There has been some difficulty in understanding why bronze, a composition of two metals, was used before iron, an unmixed metal. But this difficulty disappeared when it became clear that pure copper, not bronze, was the first metal used by man. Now we know that there has been first a long period of copper without any sort of alloy; then a period of copper with only a little tin; and lastly—thousands of years after the discovery of copper—a period of copper with about 10 per cent. tin, the true Bronze Age.

Iron was discovered at a comparatively late date. Many years ago I pointed out that the Egyptians did not use iron before the fifteenth century B.C.* The researches made in Chaldæa and other parts of western Asia have given no iron of a date earlier than the last centuries of the Second Millennium before our era. And in Greece, where we now know so much about the Mycenæan period, the first iron has been found just at the end of that period, in the twelfth century B.C. Dr. Arthur Evans agrees with me,

* MONTELIUS, *L'Age du Bronze en Egypte*, in *L'Anthropologie*, 1890.

that the end of the Minoan (Mycenæan) period and the beginning of the early Iron Age in Crete may be dated about 1100 B.C.

My opinion about the late appearance of iron in Egypt has been corroborated by many later finds, especially by Mr. Flinders Petrie's most important diggings in the old town at Gurob that existed in the beginning of the XVIII dynasty, and was abandoned about 1500 B.C. A great number of bronze tools used by the workmen living in that town, but no trace of iron or iron rust, have been found there.*

It has been supposed that iron is mentioned in Egyptian inscriptions from the old kingdom, but the same word that in a later period signified *iron* could in old times mean *bronze* or *metal*. I am sure that this has been the case in Egypt,† as the Sanskrit word *ayas* in the old language signified *bronze*, but in the more modern *iron*.

Some few finds of iron have been mentioned as dating from the Old Kingdom. But, with one exception, they are uncertain or can be explained as secondary deposits in old monuments, and Mr. Hall says of them (MAN, 1903, 86): "In view of the certainty "of the comparatively late appearance of iron in Europe, it was, perhaps, allowable to "doubt whether they really dated back to the remote epoch of the Egyptian Old "Kingdom."

The only find of this kind that seems to be so old—the VI dynasty—belongs to the British Museum, and is mentioned in the Guide (p. 126): a mirror, an axe-head, an adze-blade, and a chisel, all of copper (or bronze with very little tin), found with "a lump "of hydrated oxide of iron (not metallic)." *See* MAN, 1903, 86, where the find is illustrated.

I have not seen the lump of iron itself, only a photograph of it, but I know that some of the archæologists in the department of British antiquities are of the opinion that it has *not* been worked.

If this find really dates from the VI dynasty, it proves that *copper* (or bronze) was then used for tools. It does not prove the *use* of iron, only the *existence* of that metal. And it is well known that iron—meteoric or telluric—existed at that time, as long before the first man.

Thus I cannot agree with Mr. Hall that my opinion about the first use of iron in Egypt "is shown to be erroneous." But I fully agree with him that iron was rare so lately as at the end of the XVIII dynasty. He says (MAN, 1903, 86): "Professor "Petrie (*Abydos*, II., p. 33, pl. ii., 10) notes an iron halbert-blade of Rameses III's "time (exhibited in the British Museum, with the VI dynasty objects described "above) as one of the oldest known specimens of an Egyptian iron weapon; its date "is about 1200 B.C. Very probably it was during the XIX dynasty that its use "became more or less general, though it in no way displaced or supplanted bronze. In "the long tribute lists of the XVIII dynasty it is never mentioned, but under the "XIX dynasty it occurs in a religious text at Abu Simbel, in which the god Ptah is "made to say that he has formed the limbs of King Rameses II of electrum, his bones "of bronze, and his arm of iron. This is the oldest literary mention of iron with regard "to which there never has been any doubt whatever."

I have discussed here the problem of the first iron in Egypt, because I think that one of the most important questions about the Bronze Age is: "When ended this period "in the different countries?"

It lasted in Egypt and in western Asia, as in Greece and Italy, to the last centuries of the Second Millennium, and in the other parts of Europe to the first half of the First Millennium B.C.

OSCAR MONTELIUS.

* MONTELIUS, *Die Chronologie der ältesten Bronzezeit in Nord-Deutschland und Skandinavien* (in the *Archiv für Anthropologie*, XXV *und* XXVI, p. 151).

† This is also the opinion of the German Egyptologist, Erman. See *Arch. f. Anthrop.*, XXI., p. 5.

Physical Anthropology. Duckworth.

Morphology and Anthropology. By W. L. H. Duckworth, M.A. Cambridge: University Press, 1904. Pp. xxviii + 564. 22 × 14 cm. Price 15*s.* net. **8**

The study of mankind and of the structure of man is so old that its origin is lost in antiquity, but there are evidences of some interest being taken in the subject throughout the historic period. That this study was considered worthy of the highest classes is demonstrated by a work on anatomy by one of the early kings of Egypt, that its professors thought highly of it can be concluded from the title of the first English text-book, *The Anglishman's Treasure, or the True Anatomy of Man's Body.* In modern times the practical study of the physical characters of man has fallen into the hands of the anatomists, and for some centuries has been taught almost exclusively to medical students. The subject may be looked upon from three different standpoints. The utilitarian, which requires such a knowledge of the structure of the human frame as is really necessary and actually made use of by the physician or surgeon for the correct diagnosis and treatment of the various accidents and ills to which the flesh is heir. Save for certain features, made the close study of the specialist, the amount required by the general practitioner is very small though based on the broadest outlines. This system—in which the practical use of every fact was carefully impressed on the mind of the student by his contemporaneous study of the healing art itself—roughly speaking, was that in vogue up to the early part of the Victorian era.

The second standpoint, that of the pedagogue and examiner, is a fungus growth of the last century, and although, alas, far from dead, begins to show signs of an impaired vitality. As a result of the attitude taken up by examining bodies the embryo medical man has been kept for a varying number of years endeavouring to learn like a parrot a number of dry facts of which the very bearing, if any, was often carefully concealed amid a maze of detail. The student spent many hours wearily dissecting bodies in a manner calculated to inculcate habits, eradicated with difficulty in a subsequent course of operative surgery. The consequences are well known, the student having passed his examination in this when brought face to face with the living subject had to wipe the slate of his memory and begin again to learn that which he should already have acquired.

The third aspect from which the study of the human body can be approached is one in which man is viewed not as a thing apart but as the final product of a gradual evolution. It is, then, of interest to compare his structure with that of the other members of the animal kingdom; to see the use and meaning of every organ and to trace its origin and changes through an ascending chain of present and past organisms. In other words, that human anatomy should be valued not for itself alone but as an integral part of the science of biology.

The teachers of Cambridge University have been well known in several past decades for endeavouring to inculcate a love of this subject as a science amid a certain opposition from exponents of so-called more practical, in reality more cramming, methods which overlooked the fundamental object of a university—to educate rather than to teach. Many recent books have contained notes and appendices showing the scientific bearing of somewhat bare facts and gradually the view of human morphology as a science has been built up. Mr. Duckworth's text will, therefore, be welcomed as a sign that now human morphology and anthropology has taken a definite position as a section of biology, and that the University of Cambridge was justified in making it a subject for an advanced honours examination.

The main outline of the treatment of the subject is as follows:—After a brief historical introduction the author develops his theme in sections. In the first the definitive characters of the mammalia are first made clear, then the classification into orders, the last of which, the primates, are further sub-divided into families. The general anatomy of these various families is then described at some length; the skeletal, muscular, and nervous systems receiving the greatest attention, but none being

overlooked. Throughout the description the various families are mutually contrasted, and, for the necessary purpose of brevity, a certain acquaintance with anatomical terminology is assumed. Having thus shown "that man is associated in a natural zoological "classification with certain other mammals in the order primates," the author passes on to consider man's ancestral history or evolution, by the threefold methods of embryology, the comparative morphology of the various human races, and palæontology.

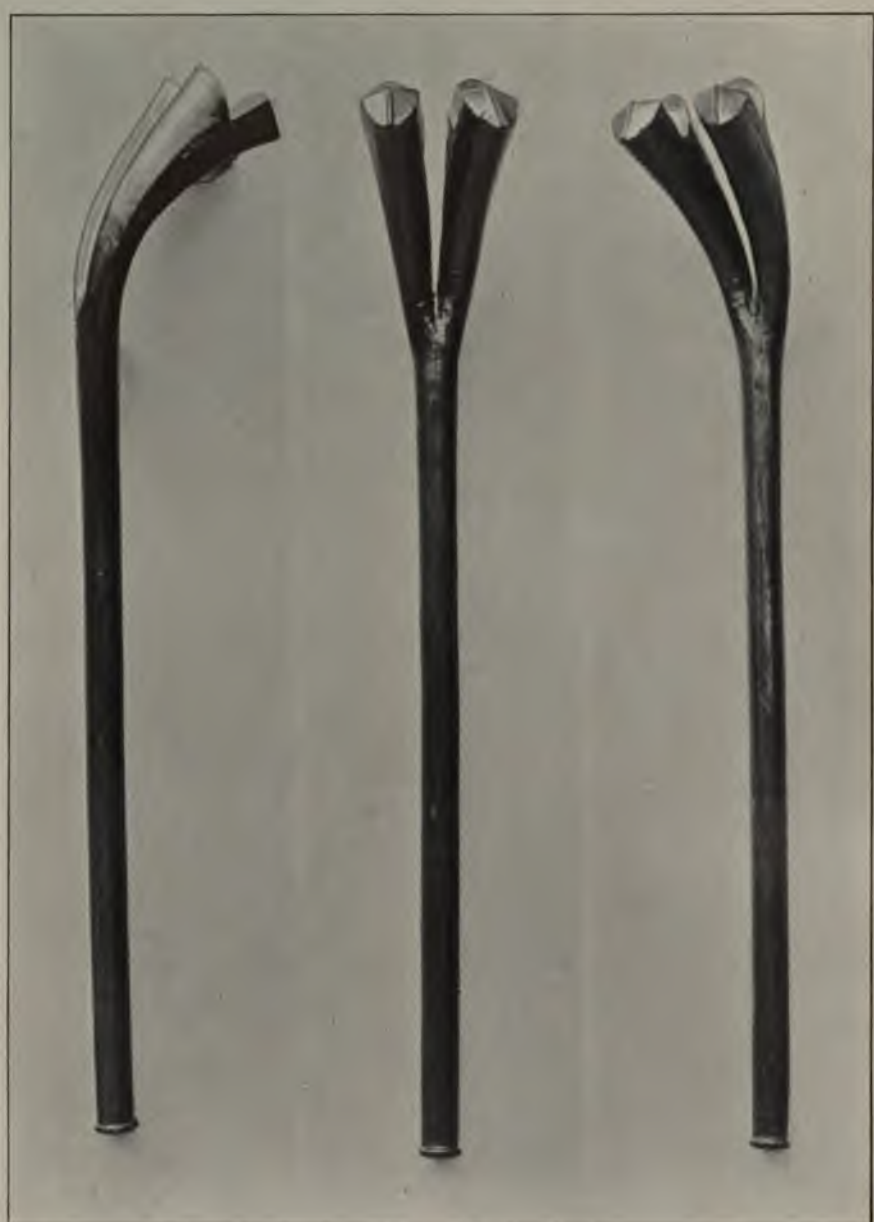
The embryological section is of special interest, starting with the generalisation that ontogeny, or the development of the individual, repeats phylogeny, or the evolution of the species. There is shown not only the general resemblance to the mammalia in all stages, but more special affinities to the primates and the simiidæ in particular. It is in the close tracing of the latter resemblances that this treatise differs from most, if not all, of the text-books of embryology, the author not being concerned so much with explaining the main features of development as in treating the subject on strictly comparative lines. The gradual formation of all the systems of organs is treated in turn, a special feature being a large number of drawings of appearances of these as seen in embryos of members of the different families at corresponding stages of development. For purposes of ready comparison many of these are printed in juxtaposition.

It would appear that characteristically human features are early imprinted, although human and simian embryos long run so parallel a course that the conclusion seems inevitable that the latter family "reproduce in many respects a definite and comparatively "recent phase in the history of human evolution." The section on variations in anatomical conformation is very complete, though more especially dealing with the osseous and nervous system. All the current methods of investigation which supplement description by numerical data are described in considerable detail and without bias in any one direction. In the treatment of this division of the subject, Mr. Duckworth's book is in advance of any yet published in English and renders itself an essential item in the library of the physical anthropologist. It is only to be regretted that considerations of space appear to have rendered it necessary for the author to assume a considerable osteological knowledge on the part of the reader. If, in a subsequent edition, it would be found possible to indicate more fully in the figures the names of the various anatomical features depicted, the value of the book would be considerably enhanced, especially to the large circle of anthropological enthusiasts who have not passed through a special course of anatomical training. In this connection also it is somewhat unfortunate that the diagrams of the Frankfort convention should have been so exactly reproduced without correcting the obvious anatomical error presented in the occipital bone.

A special section is devoted to a classification and minute description of the morphological varieties of the human race. Although these varieties can be in the main substantiated and the description of their physical characters is very complete, it might to some seem that greater stress could be laid on the wide range of variation which occurs within each group instead of recording absolute values for the various indices and measurements without any indication of the range of deviation from the mean. The last section dealing with the fossil remains of the primates which have hitherto been described presents the same wealth of detail and exposition of the bearing of various facts as its predecessors. The arguments in favour of the zoological position of the various fossil types are marshalled with great clearness and with due regard to their relative importance.

The author concludes by showing that the future evolution of the hominidæ must be based on a physiological equilibrium of the various functions and so is ultimately dependent on hygienic conditions. This text-book is so rich in material that it is difficult to select any one portion as of greater or less importance than another, but in regard to the scope, plan, and bearing of the whole, Mr. Duckworth may be congratulated on having done much to set physical anthropology at rest with the critics who accuse it of lack of method and to place it in its true position among the sciences. F. S.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.



FIJIAN DOUBLE-HEADED CLUB.

ORIGINAL ARTICLES.

Fiji. With Plate B. Balfour.

A Double-headed Club from the Fijian Islands. *By Henry Balfour, M.A.* 9

I recently acquired the specimen shown in Plate B, and think it may be worth while to place it on record, as it is the only example of its kind of which I know. Should other similar examples exist I should be glad to hear of them. Baron A. von Hügel, to whom one naturally turns for information on matters Fijian, tells me that he has never seen another example. In general design this club is of a type very well known amongst the many and often very peculiar forms under which the fighting club manifests itself in the Fijian group. It is an old specimen, of moderate weight, cut from a single piece of hard dark wood, not embellished with decorative carving. The surface is highly polished. Its peculiar feature lies in the head or "business end" being double. Both heads are exactly alike and are completely detached from one another, except at the point where they become merged in the long, rounded handle. It is not easy to say whether this twin-form of head is due to the suggestion afforded by a forking branch or root. I am at least doubtful if this is the case, and yet the labour of carving such a double form from the solid must have been great, and hardly justified by the result, as far as producing an efficient weapon is concerned, inasmuch as there must be a great tendency for the fissure between the two heads to become extended since a split down the handle is obvious, and this tendency is one which the present specimen has proved unable to resist. As a club such a form must be relatively weak and unsatisfactory, and no doubt we must attribute this unusual type to individual fancy.

HENRY BALFOUR.

New Guinea: Totemism and Sociology. Holmes.

Introductory Notes to a Study of the Totemism of the Elema Tribes (continued from MAN, 1905. 2). *By the Reverend J. H. Holmes, Local Correspondent of the Anthropological Institute.* 10

FEASTS AND CEREMONIES.—A detailed account of such feasts as are regarded as totem feasts cannot be given here, but the significance of the respective feasts must be noted, as it is of totemic importance. There are at least two tribal feasts which may be regarded as strictly totemic feasts: the "semese" feast, which embraces the whole of the totem kins of kindred tribes in Elema; the "kokave," which institutes periods of taboo on such foods as it is thought desirable to protect, either for a time of scarcity, or for a feast of tribal importance, such as an initiation feast.

The totem deities of the respective tribes of Elema are represented at the "semese" feast on masks; the deities of the respective communities of the tribe making the feast are represented in a similar way, as are individual totem objects, but the occasion of such a feast is regarded as fitting for public invocation of the tribal totem deities for the future welfare of the tribe.

The totem feast known as "kovave" is not so universal in display of masks, and is only of importance to the individual tribe imposing a taboo on certain foods, but its totemic significance is marked, and in addition to invocations, it is an occasion for presenting each initiate to the god "kovave" that his protection may be guaranteed to the initiate at all times when travelling inland.

Representatives of kindred tribes and of alien friendly tribes come from far and near to attend the "semese" feast; the feast extends over a period of nine days, but the first day of the feast is the occasion for such ceremonies as are deemed due to those gods most closely associated with the welfare of the respective tribes. In some cases a god is represented in human form, and with the retinue of minor deities promenades the village to receive homage in presents of pig; or a group of dancers may be seen to

turn aside from the procession of masks to attend the god represented on the mask in whose honour they dance; whilst the procession continues its parade of the village this group reverently watches one—adult male—of its number step in front of the mask, break a bamboo pipe, scatter the broken pieces far and wide in every direction, and with much throwing of the arms and swaying of the body invoke the god in the interests of his family.

Communal feasts are not of distinctly tribal importance, but many of them have totemic significance. When it is thought desirable for the convenience of the community to taboo sea-fishing that the women may confine their fishing to rivers and creeks, a feast is made in honour of the god of the sea by one only, or more, of the communities of a tribe. This feast is exclusively for initiated male members of the tribe, women and children being forbidden any share in it. The food set aside for the feast is eaten in the totem temple, or communal "eravo," at night, but prior to partaking of the food, and after much beating of drums and blowing of conch shells, the chief of the community stands on the entrance platform to the "eravo" and addresses the god in whose honour the feast is made. His address opens with a narration of the doings of the community thus honouring him; it closes with an appeal for protection and assistance in all those matters which are associated with the particular god being honoured.

FIG. 2.—OROKOLO. PROCESSION OF TOTEM MASKS.

TOTEM PRIESTS AND TOTEM PRIESTCRAFT.—Enough has been stated, in the foregoing, to warrant the conclusion that the totemism of these tribes inculcates reverence for such supernatural beings as they regard as their totem gods or beneficent deities, but it is difficult to determine whether reverence or superstition is the dominating factor in their moral life. Undoubtedly the extraordinary phenomena of nature, as winds—fair and foul—and storms; thunder and lightning; droughts and scarcity of food; normal seasons and an abundance of food; epidemics, or such sicknesses common to the lot of all men; in brief, whatever seems to be beyond their power to control they regard as being expressions, favourable or otherwise, of their respective deities and demand such observances of ceremonies as are due to the particular deities concerned.

The rain doctor is a priest of the god whose special attribute is to provide rain. The cynic may retort, he is a rain-doctor because of the payment he receives from his tribe when asked to procure them rain; if he considers the payment at all, it is due to him to say, the labourer is worthy of his hire; personal avarice and cunning do not constitute him a rain-doctor or priest of the god who has control of the rain. This god

is his totem deity; he assumes, as do the people of his tribe, that such invocations as he may make to his totem deity are likely to be more effectual than would the prayers of other individuals of the tribe, whose totem deities are concerned with other phenomena of Nature.

His invocations may, or may not, seem to be effectual in procuring rain; if the latter, he concludes that he, individually, or his tribe, has offended his totem deity. No one among his tribe will question such a conclusion, but all will do what he advises, that his totem deity may be appeased.

Something akin to the foregoing is seen when an individual totem object, as the flying-fox, damages the food in the gardens of the community, or the cockatoo raids the coconut trees. One man in a community may be said to be a priest to the flying-fox or cockatoo; there may be many men in the same community having as individual totem objects the flying-fox or cockatoo, but the right to invoke the particular totem object which is becoming an annoyance to the community is allowed to belong to one man in virtue of his social position in the community. There are many invocations of set phrases, but hitherto we have not been able to get them, *i.e.*, such as are given to us seem to be fabrications, or mutilated sentences of fixed prayers, probably only known to the respective priests and jealously guarded by them.

FIG. 3.—OROKOLO. SEMESE MASK AND GROUP OF DANCING GIRLS.

Intercessory prayers to totem deities prior to setting out on a voyage to a distant tribe; payments made to certain individuals that they may invoke their totem deities for fair winds to be given to the voyagers; the sacred man who accompanies the travellers to appease the god of the sea, or to entreat the respective gods of the mountains for a favourable land-breeze; the solicitous anxiety of all to keep in favour with the medicine-man of the tribe, lest he uses his power as a sorcerer and brings sickness and death rather than health and life; all these frequent observances indicate that the totemism of the Elema tribes recognises a form of priestcraft, primitive as it may be in its present stage but ample enough to give satisfaction to the respective tribes in their present barbaric state.

Sorcery and Magic.—In what sense the sorcery and magic of the Elema tribes are associated with their totemism as a cult it is difficult to determine; that the former is regarded by them as distinct and apart from the latter there can be no doubt. A man is suspected, or known, to be a sorcerer but he will not admit outside his clique that he practises sorcery. A man is known to have powers of healing by magic; he is sent for

publicly and will practise his magic on the sick in the presence of relatives; notwithstanding, he often resorts to duplicity; no one thinks of him other than as a benefactor to his people. Whereas the sorcerer may be said to be a suspect, people treat him deferentially lest he should do them harm by the powers he is assumed to possess; in no sense is he regarded as a benefactor, unless it be by exceptional cunning that he conceals the fact that he is a sorcerer and is content to pose as a magic healer. This is said to be done by certain individuals, but their position must be an unhappy one if they have any faith in their skill to work evil or good by magic on their fellows, because when a man dies from some unknown cause it is a common thing to consult men known to have magic power, to ascertain the name of the sorcerer who caused the death, that the relatives may shoot him and thus avenge the death of a member of their family. On the other hand, the native associates, in a way unintelligible to us, his sorcerer with his totemism, and, notwithstanding, his influence as an unit of the tribe is not beneficial on the moral life of the tribe; still those malignant deities from whom it is assumed he receives his power to cause decrepitude, premature senility, sickness, and death, are duly represented on masks, or by effigies in the pageantry of the "semese" totem feast. They seem unable to dissociate sorcery from their totemism, detrimental as it may be to their moral life; apparently they have no desire to dispense with that kind of magic which seems to give them tangible proof of the supernatural power of totem deities.

It must be remembered that these tribes distinguish between the magic referred to above and what is termed "black magic"; the above or "white magic" includes the use of charms and prayers in minor ailments, and is regarded as legitimate and beneficial; whereas "black magic" seems to be regarded as a minor art of a sorcerer's equipment and embraces ill-wishing and the evil eye. One needs to live a long time with these tribes, to travel with them away from home among kindred or alien tribes, to become aware of the influence of sorcery on their moral life. Washing the feet before getting on a canoe, throwing away palm branches or leaves by individuals after having lain on them, the anxiety to avoid anyone becoming possessed of one's hair clippings and nail parings; these and many similar precautions all indicate that the minds of these people are under a constant strain of superstition, and it seems that their totemism alone saves them from absolute moral degeneration.

J. H. HOLMES.

Russia: Animal Folklore. **Janschul: Thomas.**

Animal Folklore from Russia. *Collected by Professor Janschul and communicated by N. W. Thomas, M.A.* **11**

For the following replies to my questionnaire I am indebted to Professor Janschul, of St. Petersburg, to whom I take this opportunity of expressing my thanks.

2. Rabbits should not be kept in the same building as horses, the former bring them bad luck. Moscow.

3. A hare running over the road portends death for the person who sees it, or a friend or relative. Moscow and many parts of Russia.

7. Domestic animals of a certain colour "do not belong to the house" (Не ко двору), *i.e.*, are obnoxious to the house spirit. In some houses the kobold torments black horses, in others chestnuts, speckled hens, &c. Great Russia.

8. For the cult of the dog among the burials see Этнографическое Обозрвнie Vol. XXXVI., p. 64. In the district of Pudogsk, Gouv. Olonetz, the bear is regarded as hostile, and is often called "accursed" (Окаянный). The body is buried after the hide is taken off, and it is considered heinous to eat its flesh. Others say the bear is God's animal. Whatever it takes it takes by God's leave.

The spider is an unclean animal; forty sins are forgiven to anyone who squashes a spider with his little finger; after doing so the arm must be washed as far as the elbow,

for it has become unclean. If the spider is crushed under the foot no sins are forgiven. Troilzkœ, district Parussk, Gouv. Kaluga.

To kill a spider is regarded as a sin; people say, however, spiders contain sublimate (?). Pudogsk, Gouv. Olonetzk.

If anyone has been bitten by a house snake, no spells or charms are of any avail. Rudnevo, district Podolsk, Gouv. Moscow.

House snakes recognise certain people and know them by name. A monk in the Nikolo-Ugriesch Monastery has often seen snakes come out of a grave and creep to the door of a house intended for the Archimandrite Pimen. The monk took a stick and shouted, "Away with you; I'll tell Pimen," and they crawled back into the grave. This I heard from the monk himself. District and Gouv. Moscow.

The house snake revenges itself for the destruction of its nest by spoiling the milk, and sometimes whole families die from this cause. Little Russia.

If a house snake's nest is destroyed they spoil the milk wherever it is. Ostafiero, district Podolsk, Gouv. Moscow.

The flesh of bears, hares, pigs, and fowls is regarded as unclean and not eaten. A swan is never shot; it is a great sin to do it any harm. The swan is a woman (*cf.* Maikoff, Поѣздка въ Обонежье and menstruates like a woman. It is sinful to use the swan as food. It is not unclean. District Pudogsk, Gouv. Olonetz.

11. It is still the custom to buy birds and set them free on March 25th (Annunciation). Moscow.

13. Badgers' bones are regarded as a sympathetic charm against fever, and are worn sewn up in a bag. Hunters do the same and are guarded against all evil. Gouv. Olonetz.

14. Cakes in the form of larks are still baked on March 9th. Moscow.

15. The souls of unbaptised children are transformed into pigeons. They do not go to heaven but fly about and beg for baptism. Something must be thrown over them and "John" or "Mary" said, according as it is a boy or a girl. This is a substitute for baptism. Once a peasant saw two pigeons sitting, and they said to him "baptise us." As he had nothing to cover them with he tore off the sleeve of his shirt and saw them take it up to heaven with them. Two girls of the village had died previously. Gouv. Kieff.

The souls of the dead are believed to take the form of butterflies (*cf.* Barsoff, *Klagelieder*). Gouv. Olonetz.

16. Witches take the form of dogs or cats. If the latter are wounded the woman's body bears the marks.

18. There was once a wedding and all the people were changed into bears. That was the origin of the bear.

Once there lived an old man and his wife. The old man went to the wood to cut down a lime tree, which begged him to spare its life, and promised to fufil any wish he uttered. The wife demanded more and more, and all she wished for was granted, until she desired that all should fear them, and then they were changed into bears.

Sometimes wedding processions are transformed into wolves. Gouv. Olonetz.

22. The isba is decorated with horse's heads carved in wood. Great Russia.

Horse's skulls are put in the vineyards, &c. by the Crim Tatars.

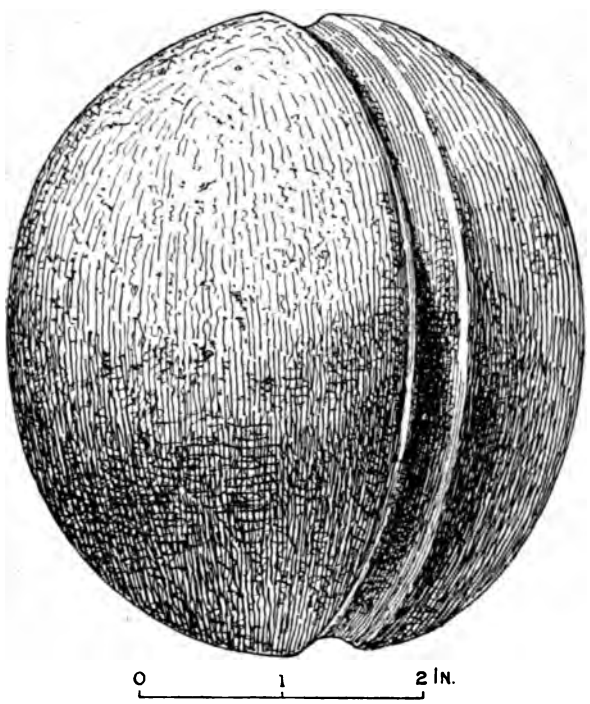
23. Egg rolling is a common game everywhere in Russia.

Each household has a house spirit; there are also house snakes, frogs, and mice; they are, however, seldom seen. The mice eat little patches of wool from the sheep, as big as the hand; the sheep like it; it is a sign the house mice are fond of them. It means the same when the house spirit plaits the horse's manes at night. House snakes and mice are seen by those who treat the cattle well. A bad or quarrelsome housewife never sees them. District Oslaschkoff, Gouv. Iver. N. W. THOMAS.

Africa, East. Hollis.

Masai Ear-ring of Stone. *By A. C. Hollis, Local Correspondent of the Anthropological Institute.* **12**

This ear-ring belonged to a Masai boy of about fourteen years of age, and was used by him to distend the lobe of his ear. It measures 113 mm. in diameter, and weighs 2 lbs. 14 oz



Masai children have their ears pierced when they are quite young, a thorn of a tree called *ol-ngoswa* (*Balanites sp.*) being used for this purpose. Boys and girls generally wear as ear-rings circular blocks of wood called *'n-gulalen*, which are gradually increased in size as the lobe stretches. The lobes are said to have attained their correct length if they meet on the top of the head.

Stone ear-rings are not commonly worn by the Masai, and this is probably the only specimen in Europe. That it is not unique, however, is shown by the fact that the former owner appeared at my house the day after he sold it me wearing a precisely similar ornament. A. C. HOLLIS.

Borneo. Haddon.

Note on the Peoples of Borneo. *By Ernest B. Haddon.* **13**

The indigenous inhabitants of the island of Borneo have been designated in the past under the general term of Dayak, but lately it has become evident that the word "Dayak" has no scientific value.

Dr. Haddon in 1901, in a *Sketch of the Ethnography of Sarawak* (*Archivio per l'Antropologia e l' Etnologia*, Vol. XXXI., 1901, p. 341), proposed to divide the inhabitants of the Raj into five groups: (1) Punan, (2) Kalamantan, (3) Kenyah-Kayan, (4) Iban (Sea Dayak), and (5) Malay. At the conclusion of his sketch Dr. Haddon says: "Apart from the Negritos and Melanesians and undoubted emigrants "from the mainland of Asia, there are in the East Indian Archipelago two races or "distinct varieties of man, the Indonesians and the Proto-Malays. Before the expansion "of the Orang Malayu [true Malays] most of these islands were inhabited by these "two races in variable degrees of purity or mixture. All the movements of the "population (irrespective of the undoubted Asiatic immigrations) that have occurred "in this Archipelago, say for a thousand years, have practically been confined to "peoples or tribes composed mainly of one of these two races or, more generally, of a "mixture of both in a differing amount."

In August 1903 Dr. J. H. F. Kohlbrügge published the results of Dr. A. W. Nieuwenhuis' anthropometric investigations in Netherlands Borneo. (Dr. A. W. Nieuwenhuis: "Anthropometrische Untersuchungen bei den Dajak." Bearbeitet durch Dr. J. H.

F. Kohlbrügge. *Mittheilungen aus dem Niederl. Reichsmuseum für Völkerkunde.* Ser. II. No. 5.)

It is evident that Dr. Kohlbrügge had not seen Dr. Haddon's publication, hence it becomes desirable to compare their independent researches.

The ethnographical conditions of Netherlands Borneo appear to be much simpler than those of Sarawak. The inhabitants are divided into (1) the nomadic hunters, Punans, Beketans, Bukats; (2) the Bahau-Kenyah group to which the Kayans belong, in the north and east; (3) the Ulu Ayar or Ot Danum in the south.

In Sarawak the Punans lead a nomadic hunting life in the upper reaches of the rivers. The Kenyah-Kayan occupied the head waters of the rivers and have spread northward, taking possession of the ground occupied by the Kalamantans. The Kalamantans are a heterogeneous people, who, in the past, occupied the land lying between the coast and the mountains of the interior, but who are now being squeezed between the Ibans, who are ascending, and the Kenyah-Kayan peoples, who are descending the rivers. The Ibans, or Sea Dayaks, occupy the coast and lower reaches of the rivers. The Malay came later and has been followed by the white man. Chinese immigrants have visited Sarawak probably for hundreds of years, but at present their influence on the population has not been subjected to a scientific scrutiny.

SERIATION OF THE LENGTH-BREADTH INDEX.

Cephalic Indices	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	Total.
Ulu Ayar				2	1	1	12	7	3	3	–	2	2	2																	35 living N.
Murut			2	2	5	1	5	3	1	3	1	2	2																		27 crania H.
Kalamantan						3	7	2	8	4	5	9	9	6	6	4	2	2													69 living H.
„			2	2	7	2	9	8	8	5	1	5	6	–	1	1						1									56 crania H.
„					2	5	14	4	17	12	13	14	10	11	12	4	3	3						1							125 living and crania* H.
Punan										2	3	3	3	1	3	2	–	2	1			1									21 living H.
„										1	–	3	–	3	3	–	1	2	1												14 living N.
Kayan	1	–	–	–	–	–	–	2	4	5	8	6	8	7	3	6	5	4	4	3	2	2	2	2	–	3	–	–	–	1	78 living N.
„								2	1	1	1	4	5	1	1	4	–	1		1											22 living H.
„								1	2	–	1	–	–	1													1				6 crania H.
Kenyah						1	1	9	6	11	7	5	14	6	4	6	3	4	1	3	2	1	1	–	–	–	1				85 living H.
„														2					1												3 crania H.

* (Two units have been added to the indices of these crania to grade them with the living.)

The Punans are a fairly uniform, low, brachycephalic group, the cephalic index varying from 77 to 89 in Dr. Haddon's measurements of 21 living subjects with an average of 81, and Nieuwenhuis obtained an average of 82, with a range from 77–86. Both agree that the Punan, Beketan, Bukat, and Ukit, may very well be representatives of the aboriginal inhabitants.

The Kalamantans of Sarawak were probably an essentially dolichocephalic people, but now most of the tribes show a considerable range of cephalic index. Dr. Haddon's measurements of 125 Kalamantans, crania and living subjects (the indices of the crania being increased by two units to grade them to the living) show that 13·6 per cent. of the heads have an index of 75, and 9·6 per cent. attain an index of 81, and some even range up to 84. Of 27 Murut crania, 18·5 per cent. occur at 71 and also at 73, thus proving that these people are distinctly dolichocephalic. The only cranial measurement obtained by Dr. Haddon of a Land Dayak is that of a Singgi Land Dayak with an index of 71·3. It is thus probable that the Land Dayaks are a dolichocephalic people, or at least have a dolichocephalic element.

The Ulu Ayar group of Nieuwenhuis is essentially dolichocephalic with a preponderance of indices at 74 on the living, but this group ranges to an index of 81. The Ulu Ayar are also noteworthy from their skin colour being much darker than that of the Kayans or Punans, and Nieuwenhuis states that he sees no reason why they should not be of Indonesian stock.

The Kenyah-Kayan group shows principally a low brachycephalic element. Thus of 85 Kenyahs, Dr. Haddon obtained a preponderance of indices at 80 on the living, the group ranging from 73-94. For 78 Kayans, Nieuwenhuis found a range from 68-97 with maxima at 78 and 80. Dr. Haddon found a smaller variation in the 22 Kayans that he measured, they ranged from 75 to 87, 22·7 per cent. having an index of 80.

The Kayans that Nieuwenhuis measured are thus a mixed race, and this is not surprising, as, since they have emigrated from Apu Kayan in Central Borneo, their original dwelling place, they have largely intermarried with other peoples. Niewenhuis has not given us any measurements of the Bahau or Kenyah peoples, so that no comparison can be made between the Bahau-Kenyah group of Netherlands Borneo, and the Kenyah-Kayan group of Sarawak.

The Kenyahs occupy to a large extent the land vacated in Central Borneo by the emigrating Kayans.

Dr. Hose, however, is of opinion that the Kenyahs migrated into Sarawak some 100 years before the Kayans.

The Kenyahs, from Dr. Haddon's measurements, are a much more mixed people than the Kayans, but the curve composed of their indices resolves itself into two components which indicate a low brachycephalic and a dolichocephalic element.

Assuming that the Kalamantans are mainly a dolichocephalic group, who in Sarawak have been overlorded by the brachycephalic Kenyah-Kayans, the double curve can be explained by intermarriage. The very low dolichocephalic measurements in this series are so low that they could scarcely be a variation of a low brachycephalic type, and almost certainly indicate that the observer has really measured the descendants of Kalamantan slaves, although the individuals may seem to be of pure Kenyah-Kayan origin.

From the two observers, Haddon and Nieuwenhuis, we see that in Central Borneo there is a very vigorous race, the Bahau-Kenyah-Kayan which has pushed out in all directions, and has become a mixed people by intermarriage with the neighbouring dolichocephalic tribes.

The Kalamantans of Sarawak show a distinctly dolichocephalic curve, but their measurements indicate a brachycephalic element. This is only the converse of the dolichocephalic element in the Kenyah-Kayan group. The Ulu Ayar and the other dolichocephals of Netherlands Borneo are apparently divided much more sharply off from the Kenyah Kayan group than are the Kalamantans of Sarawak. They are thus a much more homogeneous group than the Kalamantans.

It is probable that the Muruts and the other dolichocephalic elements in the Kalamantans as well as the Ulu Ayar are the least modified members of the Indonesian race to be found in Borneo.

Kohlbrügge states, at the conclusion of his report, that it appears to him the ethnographical conditions of Borneo are similar to those in Java. He says : "In Java, coast "towns, such as Batavia, are populated with true coast Malays, and all along the sea "coast live Javanese who by their measurements are not distinguishable from the "coast Malays. In the interior there is a single isolated people who are Indonesians. "In Borneo we can compare the populations of Bandjermasin and Pontianak with those "of Batavia and Surabaja ; the Kayans and Punans with the Javanese ; the Ulu "Ayar with the mountain people of Java." "And," he adds, "one cannot, at present, "give any opinion as to what cause the darker colour of the Ulu Ayar is due."

Thus on most points Dr. Haddon and Dr. Kohlbrügge agree, that in Borneo we have dolichocephalic peoples whom provisionally we can regard as of Indonesian stock, and another group of low brachycephalic peoples, whom Kohlbrügge compares to coast Malays, and for whom Dr. Haddon has adopted the term Proto-Malay.

ERNEST B. HADDON.

REVIEWS.

Africa. **Powell-Cotton.**

14 *In Unknown Africa: A Narrative of Twenty Months' Travel and Sport in Unknown Lands and among New Tribes.* By Major P. H. G. Powell Cotton, F.R.G.S., F.Z.S. With 204 reproductions from drawings by A. Forestier, and the author's photographs and two maps. London: Hurst and Blackett, Ltd., 1904. 542 pp., appendices and index. 23 × 14 cm. Price 21*s*.

This exceptionally well illustrated, interesting, and valuable book requires a notice from us because of the brief word-pictures of many unknown tribes.

Before referring to this part of the book, however, we feel it our duty to call attention to the official discouragement Major Powell-Cotton received and the difficulties which were put in his way by the officials both at home and in East Africa. It is surely not only surprising but really discreditable when a scientific sportsman is willing to spend twenty months abroad in arduous work at a cost of some £200 a month, that obstacles should be placed in his way by officials both at home and abroad. This paragraph, for instance, is not pleasant reading:—

"As the naturalist, anxious to throw light on the distribution of these animals, thus appeared to be entirely debarred from doing so, I thought the Museum authorities would be glad to render me what help they could, by obtaining for me permission from the Foreign Office to shoot giraffes, on the understanding that I should later present them with specimens at my own expense. My proposition, however, was met by the directorate of our national institution with a point-blank refusal to move in the matter, although they graciously intimated their willingness to accept any specimens that might come their way." (p. 3.)

Again, we read with reference to the author's request to Government officials for special permission to tranship his arms and ammunition at Aden:—

"To this end I spent the whole of one morning interviewing officials both at the Foreign and India Offices, all of whom were exceedingly patient and polite, but none of whom had ever heard of such an order being required, nor knew who should grant it. Finally the matter was arranged, and I was assured that our cartridges would not be consigned to the sea nor sent on a voyage to Colombo." (p. 4.)

And we would note his reference to the difficulty of obtaining a passage in a British boat to a British Protectorate:—

"It was just the dinner hour as the *Persia* anchored off Aden, and we were not a little disgusted to find that, although we had been assured that booking through to Mombassa—at an increased fare—would obviate all difficulties at Aden and insure everything being arranged for our transfer, no one on the British India boat, *Putiala*, was expecting us, no cabins were ready, and, worse still, there was not a vestige of dinner. I mention these facts as a warning to visitors to the eastern coast of Africa to avoid the present makeshift arrangements on British boats, not that the foreign ones are all that can be desired, but they are, at all events, the best of a bad lot. When our Government at last awakes to the advisability of encouraging a direct British line to our East African possessions, instead of leaving practically the whole carrying trade in the hands of our rivals, it may be possible for a British subject to reach Mombassa in a British boat in moderate comfort." (p. 5.)

It is with a sense of indignation that we read the following passage referring to his arrival at Mombassa :—

"No sooner had we landed than our troubles began. First of all, to our great annoyance, because we had brought our cameras, rifles, &c., as personal luggage, we found the Customs officials adding a modest third to their value before calculating the duty on them. During some fourteen years of travel I have passed through many customs houses where the duties ranged from nothing to 60 per cent., but I was so struck with the novelty of this arrangement that I sought an interview with the Commissioner for Customs. He explained to me the amount included 5 per cent., which was considered to be the difference between the value of the goods at Mombassa and London, while the remaining 28 per cent. was to cover the carriage. To estimate the freight on a hand camera at £4, when it could have been sent by post for 2*s.* 6*d.*, seemed a trifle absurd, but argument was useless. At the same time, permission to remove the escort arms and ammunition from the Customs House was refused without the consent of the sub-commissioner, who was laid up with fever and could not be interviewed until the following morning. When I did see him I was informed that a personal application to the Commissioner was necessary, and he was at Nairobi, twenty-eight hours by rail. It was useless to produce my letter from the Foreign Office, and other papers, or to suggest a telegram at my own expense. I was not even allowed to collect my caravan and put it in readiness to leave the coast under C——'s charge, in case the Commissioner, by wiring his consent, should obviate the necessity of my own return. The tri-weekly train for Nairobi was due to start in half an hour. Hastily drawing some money from the bank and throwing some things into a bag, I managed to catch it." (p. 7.)

And is not the following sentence surprising :—

"The railway authorities having refused to receive a cheque guaranteed by the bank, a bag of nearly a thousand rupees had to be counted out to pay for our tickets and freight, and this caused so much delay that it was difficult to persuade the station master to keep the train till the transaction was completed. When I protested against the absurdity of being forced to pay in silver currency, no matter how large the amount, I was assured that, had the Government introduced either notes or a gold coinage, the Indian coolies imported for the railway works would have used them to transmit money home, thus seriously diminishing the postal order revenue. This is but one of the instances of the narrow-minded policy adopted in this part of the world in many matters which affect the public welfare and convenience."

We have not space to refer to the obnoxious game regulations which obtain in British East Africa for scientific *British* sportsmen, but refer to the book itself.

We regret to occupy so much space with this matter, but still one more quotation is necessary :—

"Just before embarking on the steamer to join the rail at Halfaya, I received a letter from home with the astounding news that the whole of my parcels despatched from the Nile were detained in Mombassa on the ground that the description of the contents was not sufficiently full. As they had been prepared in exactly the same way as those sent from the Ravine, Mumias, and Mombassa itself, to which no objection had been raised, and as in addition I had paid the duty and satisfied all the requirements of the Sub-Commissioner of the Nile Provinces concerning them, this seemed a somewhat high-handed proceeding, especially as no intimation had been sent direct to me or to any Uganda official.

"When I state that some of the parcels contained nothing but undeveloped photographic plates, while others were of curios and such skins as lion, to which no possible exception could be taken, and which were fully described, the reader may be able to judge whether the detention was due to laudable excess of zeal or to the less worthy desire for the destruction of the scientific results of my journey.

"The report had evidently been circulated at Mombassa that I was proceeding home by the 'Congo,' but by a stroke of good luck I had changed my mind. Otherwise all the skins, the photographic plates, and much of my other property must have inevitably perished long before I could have recovered them. As it was the situation did not look promising, but a cable to the Hon. Walter Rothschild, who enlisted the personal intervention of Lord Lansdowne, secured the release of the parcels, not, however, before a large number of the plates had been seriously damaged by damp.

"A subsequent lengthy correspondence has elicited the reply from the Postmaster General, London, that 'the parcels in question were delayed for inspection at the General Post Office, Mombassa, by order of H.M.'s Sub-Commissioner.' Now they should have reached Mombassa in the third week of July, and there they lay till October, apparently without any attempt being made to examine them.

"In fourteen years of travel this was to me, I am glad to say, an unique experience, and it scarcely redounds to the credit of the officials concerned. The only feasible explanation seems to be that they desire to discourage all straying from the beaten track and to punish those who do stray by the illegal detention of the collections made, with a view to their passive destruction." (p. 528.)

KIKUYU DANCERS.

(Reproduced by the courtesy of Messrs. Hurst and Blackett.)

We would call special attention to Chapter XXXIX. with reference to the protection of game, and how the Foreign Office stifles scientific research.

To turn now to a more pleasing task. We cannot for reasons of space enter into the zoological results attained by Major Powell-Cotton, which are of the utmost value, and for which he deserves the thanks of scientists, but we must mention the valuable anthropological notes which are scattered throughout the volume. The anthropological illustrations are of high value, and by the courtesy of the publishers we are able to reproduce one which will indicate their importance.

It is obvious that the author is a close observer, and we have rarely read a briefer and yet more satisfactory and graphic account than Major Powell-Cotton's of the Massai (*see* pp 169 to 173), where the life-history of the Massai is so well sketched.

The author also gives a remarkably good description of the cave-dwellers of Mount Elgon, which is exceptionally well illustrated. Major Powell-Cotton agrees with Joseph Thomson in thinking that the caves in their present form are highly artificial, the natives of bygone ages having worked away the softer parts of the rock of the original small cave or vault in the cliff as their needs or caprice dictated, and he noticed innumerable chisel marks on the walls. It is true, however, that the natives, or rather the present inhabitants, denied that either they or their fathers had ever hewn out these caves They must, therefore, have been made either by another long-forgotten tribe or possibly by the remote ancestors of the present inhabitants.

Sentries are posted to guard the difficult parts leading to the caves. The entrances of the caves were protected by stockades ; the mouth of one cave, for instance, was some 36 feet wide by 16 feet high, almost closed by a strong stockade of thick poles interlaced ; a very small opening is left in the stockade as an entrance, and inside a pile of poles is provided to barricade it at the first sign of danger. The author was struck by the neatness and cleanliness of the dwellings. The natives were quite friendly, but the cave-dwellers kept themselves very isolated, although Major Powell-Cotton believes it is owing to the fear of being raided by their neighbours. This interesting tribe will soon merge with the dwellers of the plain and lose its identity. A description of the Karamojo tribe is also very interesting, and he also mentions a mysterious race of people, the Tepeth. They are very unlike the Karamojo, both in appearance and in their dwellings, which are situated on the tops of precipices, and they carry on a trade in flour with passing caravans, to whom the produce is lowered by means of ropes in order that the secret of their fastnesses may not be betrayed. The writer of this review found the same thing to occur in the north-west of Bahr-el-Ghazal.

Finally, one must say that there are innumerable points of interest to the anthropologist in this book, and we hope it will be widely read and studied. May we add one criticism, the weight of the book is really too much—it weighs 3¾ lbs., which surely might have been avoided.

R. W. FELKIN.

India. **Holdich.**

India. By Sir Thomas H. Holdich, K.C.M.G., K.C.I.E., C.B. ("Regions of the World"). London : Henry Frowde, n.d. Pp. xii+1375. 17 × 11 cm. Price 7*s.* 6*d.* **15**

The latest volume in the "Regions of the World" series deals with India in the widest application of the name, including Balochistan on the west and Burma on the east. Sir Thomas Holdich is well qualified by his wide experience and varied acquirements to deal with this great theme, and he has given us a work not only of great value as a summary of information about the Indian Empire but also a brightly written and interesting volume, which is never dull and contains many eloquent descriptive passages. The description of a dust storm on the North-west frontier on p. 356 is an example of this, to the accuracy of which I can speak from personal experience ; the point of view was no doubt the summit of Sheikh Budin looking down on the sandy plain of Marwat. The description of Kashmir as seen from the summit of the Tragbal Pass (p. 107) may also be signalled out as a piece of vivid writing. Apart, therefore, from the substantial merits of the book there is much to interest the general reader. Few officials who have spent their lives in the service of the Indian Government have been able to visit more than a small part of that vast country, but Sir T. Holdich's work in the survey of India has taken him over the length and breadth of the land and beyond the mountain barriers

which bound the Central Asian and Iranian plateaux, and he is able to describe most parts of India from intimate personal knowledge.

From the geographical standpoint this book is probably the best account of India to be found within a moderate compass, and it is provided with a very full system of maps and diagrams. The coloured contour maps are excellent and supply a much felt want in Indian geography. They are based on the latest information, and are especially valuable as regards the mountain system, so important in its effects upon the history and social system of India. These maps are not confined to the territory within the confines of the Indian Empire but include the whole mountainous territory comprised in the Himalaya, Hindukush, Karakoram, and Pamir ranges, the plateau regions of Thibet and Afghanistan, and the head-waters of the great rivers of Northern India and Burma.

The greater part of the work seems to have been written previous to the Census of 1901, and as far as the statistical part goes it relies on the figures of ten years before. This, however, is not of great importance in a work of a descriptive nature, and can easily be rectified in another edition. It is to be regretted, however, that the results of the last census were not before Sir T. Holdich, when he wrote his excellent chapter on the People of India. The conclusions arrived at by Mr. Risley and his colleagues are based on purely anthropological and authropometrical data to a far greater extent than has been possible on any previous occasion, and in the result we find a much smaller proportion of the population of India classed as Aryan or Indo-Aryan than before. This may be seen at a glance by a comparison of the map facing page 201 in Sir T. Holdich's work with the ethnological map at the end of Vol. I. of the Census of India Report, 1901. In the former, Lower Bengal, Orissa, Assam, and the Mahratta country appear as mainly Aryan, while in the latter, Lower Bengal and Orissa appear as Mongolo-Dravidian, Assam as Mongoloid, and the Mahrattas and Canarese as Scytho-Dravidian. These classifications rest mainly on head and nose measurements, while those of former censuses on which Sir T. Holdich's chapter is based have followed the language test too faithfully. The chapter cannot therefore be held to embody the results of the latest investigations. This was inevitable under the circumstances, and does not interfere with the general value of the description given of the multifarious races of India which is an excellent piece of work.

The chapter on Political Geography contains a clear and concise account of the administrative system of British India and of the Native States, and might be advantageously studied by many politicians. Sir T. Holdich here shows himself a worthy successor to Sir J. Strachey and Sir W. W. Hunter. The division of the Native States into Muhammadan, Hindu, Maratha, Rajput, and Sikh (p. 243) is not, perhaps, the best possible. It should at least be explained, for the benefit of the uninitiated, that the Rajput States are Hindu States in the fullest sense of the word. Sir T. Holdich uses the term Hindu States apparently as referring only to the South Indian States of Mysore and Travancore, but it should be remembered that there are non-Rajput Hindu States in Northern India such as the Jat principalities of Bhartpur and Dholpur. Among the Sikh States of the Punjab, too, it is scarcely correct to say that Pattiala and Kapurthala are pre-eminent, as Nabha and Jind should certainly rank before Kapurthala. When Kashmir is classed as a Muhammadan State it must be understood that this refers not to the ruling class but to the bulk of the population. On similar grounds Haidarabad might be called a Hindu state, but in both cases for the sake of clearness it would be well to speak of a state as Hindu or Muhammadan according to the religion of the rulers—the usual practice. In his remarks on the administration of Kelat Sir T. Holdich has done well to draw attention to the large proportion of appointments held by Hindus, who, it may be added, are mainly Khatris and Aroras from the South-west Punjab and foreigners in Balochistan. (p. 251.)

The chapters on agriculture and revenue (including irrigation) railways, minerals, and climate are all excellent, and the maps showing the surface features and the geology of the country are clear and good. Special attention may be drawn to the description of the railways and the diagrams showing how they follow the natural features of the country. The old centres of Mughal rule are now recovering some of their old importance as railway centres, as will be apparent from an inspection of the diagram on p. 297. Delhi, Lahore, Agra, Lucknow, Cawnpore, Allahabad, and Benares stand out as the great centres of traffic in the vast Indo-Gangetic plain now as in the days of Akbar. Cawnpore is the only one of all these celebrated towns that has increased in relative importance.

The following slips or misprints may be noted :—

The population in the preliminary note on p. 1 is given as 231,000,000 in 1901. This is the population of British India only, and does not include the Native States. The total population, which alone can be compared with the figures of the previous decade, is 294,000,000.

On p. 59 we are told that the Greek rulers were turned out about 126 B.C. by the "Jata Skyths." This is probably a slip for "Sakas," but it would be more correct to say that the Kushans were the Scythians, who finally destroyed the Greek rule. Their identity with the modern Jats has been thought probable, but there is no evidence that they bore any such name as Jata.

Page 114. It is hardly correct to say that the deodar is the Cedar of Lebanon, as *Cedrus deodara* and *Cedrus Libani*, though closely allied, are not identical and have different habits of growth.

Page 141. The country between Lahore and Multan is waste but not sandy, most of it being hard baked earth. The only one of the Panjāb Doābs which has any extent of sandy waste is the Sindh Sāgar Doāb between the Indus and the Chenab.

Page 143. For Gandak (l. 9) we should doubtless read Ghāgra.

Page 294. For Shahimar read Shalimar.

As a whole this book is probably the best account of India accessible to the general reader, and Sir T. Holdich has produced a very valuable addition to the useful series which Mr. Mackinder is editing. M. LONGWORTH DAMES.

Queensland : Ethnography. Roth.

North Queensland Ethnography; Bulletin No. 7, August, 1904. *Domestic Implements, Arts, and Manufactures.* Brisbane, 1904. Pp. 34, with 26 plates. 34 × 21 cm. Price 3*s.* 6*d.* **16**

Great as is the value of the work done by Messrs. Spencer and Gillen, that done by Dr. Roth is a more than dangerous rival in respect of information on ethnographical questions. Living among the tribes whom he protects, to the great advantage alike of themselves and the anthropologist, he can be far more minute than the pioneers in Central Australia, and in this bulletin we have another budget of most valuable information.

The subjects are naturally many and the work is divided into nearly seventy sections, illustrated by 261 blocks. The following are the main divisions : (1) Woodwork ; (2) Fire-making ; (3) Gums, pigments, &c. ; (4) Stonework ; (5) Tools ; (6) Household utensils ; (7) Implements of the chase, &c., the most important of these being the fourth and sixth. The information on fire-making is, however, of great interest. The ordinary method is that of the drill, and two types are in use : the first, in the peninsula and western districts, consists of two thin wands of the same material 2 feet to 4 feet in length, which are frequently discarded when they have been once used. The other, near the Herbert River, consists of a thin wand up to 15 inches long,

and an elongated oval piece of wood 8 inches to 12 inches long. On the Georgina and Diamantina, as among the Arunta and the tribes up to Powell's Creek, and on the Lachlan in New South Wales, the fire-saw replaces the drill; it is found also in the Malay Peninsula, Southern India, and other parts, but with this difference, that for the wood is substituted a piece of rattan. In Australia the implements seem to be discarded after use.

The gums are variously used, one kind for weapons, another for affixing bird's down to the body, a third on the wommera to prevent it from slipping, a fourth as birdlime, and so on; they are in some cases important articles of trade. The pigments are white, red, yellow, and black; of these, white, and in places red, is the mourning colour, yellow is the summer suit, black is mainly used in decorative art, and red very generally in war. At Cape Grafton the exogamous classes were formerly "red" and "white." Besides these pigments green seems to have been used occasionally; it is mentioned by Macgillivray (*Voyage*, II., 92) as in use at Double Point.

Dr. Roth adds a note to this section on the colour sense and names, from which it appears that blue is distinguished by a special name, while black, green, and brown are classed together. This simply means that green and brown colours are not dissociated from green and brown objects, while in the case of the commoner colour, the pigment has a name to itself. In the same way grey is only distinguished by a name in the form of a grey hair; a name is altogether wanting in some cases; *yetchel*, chestnut, is found as applied to animals, but to nothing else, and is no doubt derived from the name of some animal. The facts here detailed are of considerable interest, though, of course, no one regarded as trustworthy Semon's assertion that the only words known were for black and white. At the same time as his researches into colour-names, Dr. Roth was able to test roughly for blindness and found no case among some 200 savages.

A long and interesting description of various methods of working in stone is given and Dr. Roth adds a caution as to the niceties of differentiation, which, he says, are found in museums, but not among the users of the tools. He has, for example, found celts in use as adzes. The distribution of some of the celts seems to be singularly local, in spite of the extensive system of barter that prevails in Australia. *Apropos* of this system of barter it is interesting to note that even the sand-stone slabs for grinding nardoo and other seeds travel immense distances, the women being the "beasts of burden," if such an ungallant expression may be permitted. In some parts a second pounder seems to replace the lower stone.

Several different types of plaited or woven work are manufactured:—strainers, dilly bags (which are pliable), and baskets proper, the construction of which was fully dealt with in an earlier bulletin. The water vessels are also described in detail, among them being skin bags, which do not seem to be known in many parts of Australia, bark vessels of some half-dozen kinds, wooden troughs, vases and gourds.

The material, as Dr. Roth explains, is rather miscellaneous, but no one will be disposed to quarrel with him for giving us his material as it is completed. If a suggestion might be made, a small sketch map would not take up much space, and the distribution of the various articles would be much better appreciated. Good maps of Queensland are not everywhere available in Europe. N. W. T.

Italy: Archæology. Bicknell.

Further Explorations in the Regions of the Prehistoric Rock-engravings in the Italian Maritime Alps. By C. Bicknell. Bordighera. 1903. 27 × 18 cm. **17**

The explorations to which those now presented are a sequel were described in 1902 under the title "The Prehistoric Rock-engravings in the Italian Maritime Alps"; and were noticed at the time in MAN, 1903. 231 (*q.v.*). The present report gives the results

of a summer visit paid in July—September, 1902, by the author and Mr. Luigi Pollini. Search was made for ancient habitations and burial places in the neighbourhood of the *meraviglie*, but not even an implement came to light, and no clue appeared to the origin or meaning of the rock-engravings. Fresh examples of the latter, however, came to light everywhere, even in what seemed to be thoroughly well-known places (pp. 13-14), and as expert search proceeds, the same may be expected for some time to come. Better records also were practicable, for this time the military authorities had most courteously permitted the use of the camera "for scientific purposes." A detached specimen, found above the lower part of the Valletta di S. Maria, was secured for the Bordighera Museum. One case was noted in which a weapon had been engraved (much later, to judge by the difference of the surfaces, but yet not in modern times) *across* a figure of a rectangle and enclosures, showing that the practice of cutting these figures prevailed over a long period of time. The principal novelties of the exploration in 1902 are figured in ten plates: they include many difficult and complicated forms, but hardly anything which cannot be brought under one or other of the principal motives already known. The likeness of V. 24 to a human face is probably accidental, though of course, human figures in silhouette are well-known. J. L. M.

ERRATUM.

In Dr. Seligmann's note on the Cook Daniells Expedition to New Guinea [MAN, 1904, No. 114], in line 24, "Pangua endogamy is strictly insisted on," "endogamy" should read "exogamy."

PROCEEDINGS OF SOCIETIES.

London. Anthropological Institute.

Ordinary Meeting, Tuesday, December 6th, 1904. Mr. H. Balfour, President, in the chair. 18

The election was announced of Messrs. R. Bruce-Foote, O. Kyllmann, E. Torday, and Dr. Harrison as Ordinary Fellows of the Institute.

The Rev. R. A. Bullen exhibited a slate implement from Harlyn Bay. The exhibit was discussed by Dr. Haddon and the President.

Mr. Edgar Thurston gave a lantern exhibition entitled "Illustrations of Native Types from Southern India," which was discussed by Mr. Dames, the Treasurer, and the President.

Ordinary Meeting, Tuesday, January 10th, 1905. Mr. H. Balfour, President, in the chair.

The election of Mr. F. W. Green and the Rev. S. C. Freer, as Ordinary Fellows was announced.

Mr. M. L. Dames exhibited a collection of ethnographical objects from the North-West Frontier of India, which was discussed by Sir R. C. Temple, Sir T. H. Holdich, Mr. Ray, Mr. Lewis, Mr. Collyer, and the President.

Dr. H. D. R. Kingston exhibited a pot and stone celts discovered at Sta. Marta, Columbia, by Mr. H. Bartlett.

The exhibit was discussed by Sir T. H. Holdich, and the President.

Annual General Meeting, Tuesday, January 24th, 1905. Mr. H. Balfour, President, in the chair.

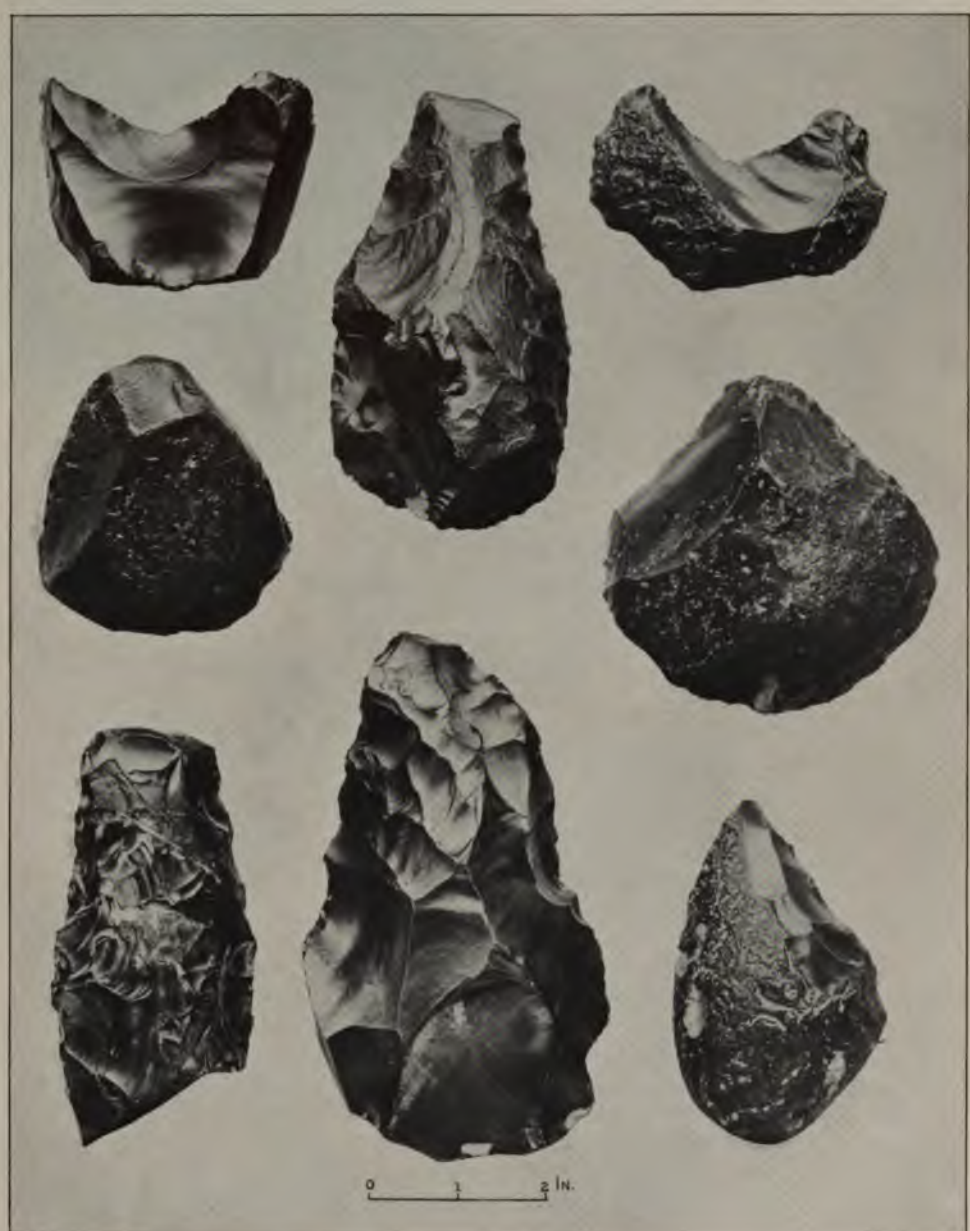
Mr. Bennett-Goldney and Mr. J. V. Holmes were appointed scrutineers of the ballot.

The Reports of the Council and Treasurer were read, discussed, and adopted.

The President's address was deferred.

Professor W. Gowland was installed as President of the Institute for the coming year.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.



PALÆOLITHIC IMPLEMENTS FROM THE THEBAÏD.

ORIGINAL ARTICLES.

Egypt. With Plate C. Hall.

Palæolithic Implements from the Thebaïd. *By H. R. Hall, M.A.* 19

In the year 1882 Major-General Pitt-Rivers, then President of the Anthropological Institute, published in the *Journal* (XI., 382) an article "On the Discovery of "Chert Implements in Stratified Gravel in the Nile Valley near Thebes," in which he described his discovery, in the deposit of diluvial detritus which lies between the cultivation and the mountains on the west bank of the Nile opposite Luxor, of palæolithic flint flakes, and noted the occurrence of implements of palæolithic type on the surface of the desert near by. Attention was once more drawn to the subject of the Egyptian palæolithic implements by the extensive collection of worked flints from the desert surface made by Mr. H. Seton-Karr in various parts of the Nile Valley, notably in the Wâdî esh-Shêkh, opposite Maghagha. There was no doubt that a great number of the flints discovered by him were of late neolithic (predynastic) and even of historical age, but among them were also what appeared to be palæoliths resembling those noted by Pitt-Rivers, and after him by Legrain, at Thebes. To Dr. H. O. Forbes, of Liverpool, however, it seemed very doubtful that these supposed palæoliths were in reality palæolithic at all, and he dated all the Wâdî esh-Shêkh implements to the twelfth dynasty or later, or possibly as far back as the fourth,* and supposed that the patination or brown oxydization found on them was no proof of immemorial age (*Bulletin Liverpool Museums*, II., Nos. 3 and 4 (January, 1900), pp. 77–115). His conclusions have, however, been criticised by Mr. H. J. L. Beadnell, of the Geological Survey of Egypt, in an article on "Neolithic Flint Implements from the Northern Desert of the Fayûm" (*Geological Magazine*, New Series, IV., X. (1903), p. 53 ff.), who points out (p. 57) that the weathered and patinated flints (which are the supposed palæoliths as it happens) must be of great age; that Dr. Forbes's assumption that as both the "palæoliths" and the later flints were found together it is probable that they are of the same age is unsound, because, "if a superior quality of flint occurs in the Wâdî el-Shêkh, I do not see why "it should not have been discovered and worked even in palæolithic times, or why "subsequent races should have rediscovered and worked the same beds, and their "products have mixed on the surface."

Mr. Beadnell also thinks unsound the assumption on which rests Dr. Forbes's argument that "it is impossible to believe that these—the palæolithic flints—could "remain (even in a single instance) undisturbed from the palæolithic days of Europe "to the present time, when the forest under which they were made and the forest soil "on which they reposed have been entirely carried away." As Mr. Beadnell says: "Is it certain that the high plateau was then clothed with forests? What evidence is "there to show that it differed in any important respect from its present aspect? And "if, as I suggest, desert conditions obtained then as now, and man merely worked his "flints along the edges of the plateaux overlooking the Nile Valley, I see no reason "why flint implements, dating even from palæolithic times, should not in favourable "cases be still found in the spots where they were left, surrounded by the flakes struck "off in manufacture. On the flat plateaux the occasional rains which fall—once in "three or four years—can effect but little transport of material, and merely lower the "general level by dissolving the underlying limestone, so that the plateau surface is "left with a coating of nodules and blocks of insoluble flint and chert. Flint implements "might thus be expected in many localities to remain for indefinite periods, but they

* On the authority of the resemblance of some of the Wâdî esh-Shêkh types to flints found by Prof. Petrie in the ruins of the town of "Kahun," and regarded by their discoverer as contemporary with the town.

" would certainly become more or less ' patinated,' pitted on the surface, and rounded at " the angles after long exposure to heat, cold, and blown sand. Flints that retain their " original clearness and sharpness of angles cannot be of high antiquity unless they " have been protected by superficial deposits."

Mr. Beadnell's conclusions are presented in so lucid and convincing a manner that it seems best to give his *ipsissima verba*. They are entirely in favour of the Egyptian surface flints of palæolithic type being in reality palæolithic, yet he does not pronounce either for or against the existence of palæolithic man in Egypt (p. 58). German investigators have no fear of accepting it; they have no doubt whatever that the Pitt-Rivers flints from Thebes and those of palæolithic type from the Wâdî esh-Shêkh and elsewhere in Egypt are in reality palæolithic. Three articles have recently appeared, one by Dr. Blanckenhorn in the *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*, 1902, pp. 694, 753 (*Die Geschichte des Nilstroms in der Tertiär- und Quartärperiode, sowie des paläolitischen Menschen in Ägypten*), the others by the veteran Dr. Schweinfurth in the *Verhandlungen der Berliner Anthrop. Ges.*, 1902, p. 293 (*Kiesel-Artefacte in der diluvialen Schotter-Terrasse und auf den Plateau-Höhen von Theben*), and 1903, p. 798 (*Steinzeitliche Forschungen in Oberägypten*). These relate to the same set of investigations carried on by Dr. Schweinfurth and Dr. Blanckenhorn of the terrains described by General Pitt-Rivers.

Dr. Schweinfurth gives photographs of some of the flints found, and contributes to Dr. Blanckenhorn's paper a map of the terrain, marking the places of General Pitt-Rivers and his own discoveries of flints, both exposed on the high desert surface and from the sides of the grave pits in the diluvial " Schotter-Terrasse." Dr. Allen Sturge accompanied Professor Schweinfurth on one occasion, and identified typical flints as belonging to the epoch of Le Moustier. Messrs. Schweinfurth and Blanckenhorn examined the terrace of diluvial *débris* in which General Pitt-Rivers had found worked flints. Schweinfurth dates its formation to the Second Glacial Period. In it were found worked flints of all kinds, as found by General Pitt-Rivers. Dr. Blanckenhorn describes them as of the type of the " *Pièces taillées* der *Industrie mesvinienne* Rutot's, welche " nach diesem Forscher für die älteste Epoche des paläolithischen Menschen, die " Moséenstufe in Belgien, charakteristisch sein sollen " (p. 757). More developed (Chelléan) specimens were also found.

The *débris*-bed is formed of the stuff washed down by the ancient streams of the Wâdîyên, the great valley running into the western hills from the village of Kûrna, which bifurcates into the Valley of the Tombs of the Kings, the *Bibân el-Mulûk* properly speaking, and the western valley. On the tops of the ridges separating the various branches of the wadi from one another, and on the semi-circular plateau at its end which forms the watershed between it and the valley which debouches into the Nile valley towards Erment, are the remains of ancient manufactories of flints, and innumerable specimens of the handiwork of the ancient knappers lying about on the surface. The great majority of these are of decisively palæolithic type; Chelles, St. Acheul, and Le Moustier. " Von diesen an Werkstätten so reichen Hochplateaus rings um den " Thalkessel der Königsgräber, stammt also zum grossen Teil das Material der diluvialen " Konglomerate von Qurna," says Dr. Blanckenhorn (p. 758), and with the stuff came, no doubt, the palæolithic flints found embedded in it.

Dr. Blanckenhorn further thinks, following the generally accepted theory, that the palæolithic men who worked the flints found lying on the high desert surface at Thebes, and embedded in the *débris* brought down from that surface by the ancient streams of the Wâdîyên to Kûrna, lived on the plateau, not in the Nile valley itself, which was still marshy and uninhabitable, the area of the Libyan desert being in the Pre-Glacial or First Interglacial Period relatively well fitted for the inhabitance of man. This is the view taken by Professor Petrie (*Naqada and Ballas*, p. 49), who speaks of the

high plateau as having been "the home of man in Palæolithic times, ... the rainfall, "as shown by the valley erosion and waterfalls, must have caused an abundant vegeta- "tion on the plateau where man could live and hunt his game." This view Mr. Beadnell considers faulty (*loc. cit.*, p. 58); he minimizes the effects of erosion in forming the lateral Nile-wadis, and, as has been seen, disbelieves in the whole theory of the palæolithic Egyptians, if they ever existed, having lived where they found and knapped their flints. For him the desert-plateaux were as dry and uninhabited in palæolithic days as now. It is, indeed, difficult to see how on any other theory it is possible to answer Dr. Forbes's objections satisfactorily. If there were woods and forests on the heights, it would seem impossible that we should find, as we do, palæolithic implements lying *in situ* on the desert surface, around the actual manufactories where they were made. Dr. Blanckenhorn does not resolve this difficulty. Yet if the constant rainfall and the vegetation of the Libyan desert area in palæolithic days is all a myth (as according to Mr. Beadnell it is), and erosion played little or no part in the formation of the Theban Wâdiyên, for instance, how came the embedded palæoliths of Kûrna into the conglomerate-bed which Blanckenhorn and others declare to be *débris* from the plateau brought down by the ancient streams of the wadi? This view also seems to be reasonable.

Erosion has surely taken place since the working of the palæolithic flints. The surface of the plateaux and the ridges between the valleys shows greatly varied weathering, ranging from the orange colour of excavations made on the ledges of the cliffs under the XVIIIth Dynasty to the almost black surface of some parts, which must have remained undisturbed for ages. It is on these black and most ancient surfaces that the majority of the palæoliths are found. The lighter-coloured tracts, where there are, generally speaking, no palæoliths, have, then, probably been denuded since the palæolithic period. We may reasonably suppose the imbedded flints of Kûrna originally came from these denuded tracts. This fact speaks for Blanckenhorn's and against Beadnell's view.

It is possible that Mr. Beadnell is a little too positive about the absence of evidence for water-erosion. The evidence of our eyes is, at Thebes, patently for erosion. Yet this water-erosion may possibly not have been that which would result from perennial streams flowing down from wooded heights (the idea of Petrie and Blanckenhorn), it may simply have been the result of water-torrents like the *sêls* of to-day which fill the wadis once in three years or so after heavy rain, but repeated at much closer intervals. May we not, in fact, suppose some difference in meteorological conditions which would make it possible for sudden rainstorms to occur over the desert at far more frequent intervals than at present? This might account for the "Schotter-Terrasse" of Kûrna, and its embedded flints, as well as maintaining the general probability of Mr. Beadnell's idea, that the desert-plateaux were desert then as now, and that early man only knapped his flints up there because the flint was there. In his second article (pp. 801, 812) Dr. Schweinfurth holds that the climate of Egypt in the period corresponding to the Glacial Ages of Europe cannot have been very different from that of to-day.

However this may be, it would seem that the possibility of the palæolithic-seeming implements from the Egyptian desert-surface being in reality palæolithic has been sufficiently vindicated.

While engaged in the excavation of the Temple of Mentuhetep III at Deir el-Bahari during this winter, Mr. E. R. Ayrton and I made several visits, both singly and together, during our spare time, to the slopes and upper surface of the *gebel*-plateau of the Western Thebaid in search of surface palæoliths. We pooled our results and divided equally. The accompanying three illustrations exhibit a few of my own trophies. Side by side, with four typical specimens in Fig. 1, I have placed four English drift implements

in my own possession from the neighbourhood of Mildenhall and Icklingham, for purposes of comparison.

Plate C. contains in the centre two very typical St. Acheulian pear-shaped weapons. The lower one is lighter in colour in the centre than at its sides. This is the lower side which was resting on the desert surface when the object was found by me. Its upper side (not photographed) is very finely patinated but not much weathered. The inequality of colour on the lower side is due to the fact that the sharp edges projected a little above the ground at the sides, so that the oxydizing effects of sun and weather were able to get at the under-surface for a short distance all round. The upper of the two implements is finely patinated ; its point has been broken off at a recent period, and the oxydizing process had just begun ; the fracture is slightly discoloured. On either side of this are two highly-patinated and much-weathered implements of more primitive type. That on the left of the photograph is evidently a kind of adze, comfortably held in the hand and admirably adapted for its work. Above, to left and right, are two half-moon shaped scrapers of the type illustrated by General Pitt-Rivers in the article alluded to above, Fig. 6. The implement in the left-hand lower corner is broken off short. That on the right is an interesting specimen of a conveniently shaped pebble artificially modified and sharpened into a pear-shaped implement. The flint of this is naturally dark in colour, whereas the material of the majority of the Theban implements is a very light-coloured chert.*

FIG. 1.—EGYPTIAN (*a*) AND BRITISH (*b*) PALÆOLITHS COMPARED.

The tool at the top of Fig. 1 on the left is a scraper, with fine bulb of percussion, paralleled by an English scraper of similar type. The two next parallel specimens are alike trihedral in shape. The next two are more or less similarly asymmetric. The lowest couple are leaf-shaped specimens, the Egyptian (on the left) being strongly patinated.

The third illustration (Fig. 2) shows some interesting smaller specimens, the larger leaf-shaped one above has little weathering or patina. In the centre is a worked ring made from a " morpholith " or round nodule of flint of a type common in the Theban Hills,

* The natural unweathered and unpatinated colour may be seen in the fine collection of neolithic implements (of the predynastic and historical periods) in the Third Egyptian Room of the British Museum.

figured by General Pitt-Rivers (Figs. 9 13). It has been split in two, and the lower side (shown) has its inner edge carefully smoothed or bevelled. I may compare a stone ring from Kent's Cavern, figured by Sir John Evans in *Ancient Stone Implements of Great Britain* (1897), Fig. 384. Similar rings are figured by Schweinfurth, *Zeits. Ethn.*, XXXV., pl. 14. To the right of the ring is a much-worn and weathered scraper of early type. On the assumption (which is probably to be rejected) that the palæolithic inhabitants lived on the high plateau, and gradually migrated downhill as the climatic conditions approximated to those of the present day, the level of the river fell, and the swamps dried up, one ought to find the most primitive and most weathered implements on the highest plateau, and the more modern ones progressively lower down on its slopes and the small subsidiary plateau between the branch-wadis. This does not appear to me to be the case. The worn scraper of Fig. 2 came from the high plateau, the equally worn and primitive-looking adze and triangular implement of Plate C. from a subsidiary plateau, whence came also the two fine St. Acheul types also on the plate, both of which are finely patinated, while the upper one (broken) is worn and weathered, the lower one not. All lay within a hundred yards of each other, simply on the surface, which is covered with the sun-blackened rubbish from the palæolithic knappers' work.

FIG. 2.—IMPLEMENTS AND WORKED MORPHOLITH RING FROM THE THEBAÏD.

The places investigated by us may be noted on reference to the map published by Dr. Schweinfurth in illustration of Dr. Blanckenhorn's paper in the *Zeits. der Ges. für Erdkunde*. Dr. Blanckenhorn's investigations of the surface-implements were apparently confined to the summit of the ridge between Deir el-Bahari and the Tombs of the Kings, and the path thence to Deir el-Medinet, *i.e.*, the lowest subsidiary plateau. Dr. Schweinfurth has also investigated the neighbourhood of the caravan-route from Kurna to Farshût (following Legrain), which runs up on to the high plateau by the side of the western valley and the great kopje which he calls "Lucina-Hügel," and the surface of the plateau southwards, as well as the district generally speaking. Mr. Ayrton and I first visited a spot, discovered by Mr. Ayrton, on a subsidiary plateau to the south of the main ridge and therefore opening not on to the Bibân el-Mulûk but on to a smaller but long and winding wadi, which debouches on to the plain some distance south of the Coptic *deir* of el-Malkata, beyond Medinet Habu. It is, therefore, beyond the *Kurn*, or high southern peak of the Theban mountain-complex, and may be identified as being below the smaller peak marked in the upper left-hand corner of Schweinfurth's map, and looking across the great Erment wadi, already referred to above. Here our best implements were found, including those of Plate C. The desert surface was evidently very ancient and undisturbed, everything, limestone as well as flints, being black with weathering. I visited by myself the surface of the high plateau, going to the summit of the *Kurn*, thence along the knife-edge on to the plateau and round to the Farshût road, passing the tract marked by Schweinfurth as *mit palæolith. Kiesel u. Artefacten bedeckte Fläche*. Here far fewer implements were to be found, though I secured some good specimens.

H. R. HALL.

Further Note on Funerary Ornaments from the Solomon Islands. 20

By C. M. Woodford, F.R.G.S., Local Correspondent of the Anthropological Institute. Communicated by C. H. Read, F.S.A. [*Cf.* MAN, 1904. 86.]

Having just received the September number of MAN in which I read with great interest the paper relating to the Solomon Islands by Messrs. Edge-Partington and Joyce, I thought that perhaps some additional information upon the articles illustrated on Plate I-J. might not be unacceptable.

At the time I received the magazine I happened to be on a short official visit to Gizo, and as Ingava, the chief of Rubiana mentioned in the article, happened to be in the neighbourhood, I sent for him and showed him the plate.

The old man was delighted and recognised every article illustrated. He told me that Figs. 1–5 were taken away by Captain, now Rear-Admiral, Davis from the natives of the village of Kolokongo at the time he visited Rubiana in 1891, and that the "bakeha" illustrated in Fig. 6 was presented to Captain Davis by himself.

FIG. 1.—"POROBATUNA," NOW IN THE SYDNEY MUSEUM.

The three objects illustrated in Figs. 1-3 are known as "serenbule." It was the custom to place one of these in the bow of the "tomako," or head-hunting canoe, when on a head-hunting expedition. When not in use they were stuck in the ground beneath, or in close proximity to, the small huts or shelters in which the skulls of deceased natives are kept.

Ingava says that the very interesting specimen illustrated in Fig. 5 is known as a "porobatuna" and assured me that it was not used as the door of a mortuary hut, but that, on the contrary, it was always placed inside with the skulls.

Ingava's account differs from information I obtained about a year ago upon the subject of a similar specimen, now in the Sydney Museum. My informant, a native named Keri of Java on Vella Lavella, then told me that the native name was "venu" and that it *was* used as a door for the small mortuary huts. I am inclined to think that the latter is the true account and that the place of origin of both specimens is the island shown on the chart as Vella Lavella but which the natives tell me is called Vekavekala.

I enclose a photograph of the Sydney specimen (Fig. 1), and you will observe that it also shows the small dancing anthropomorphic figures, but in this case they occur in pairs or singly and not in a line. The panel of carving, if I may so describe it, interposed between each pair of the figures appears to me to represent the degraded form of human face. I should say that both specimens are the work of the same artist.

I have recently obtained, . . . , fragments of another, apparently of very ancient date. They were picked up on the site of an old "golgotha" at Narovo, but the mortuary huts had long since disappeared. So far as I can judge from the fragments, it appears to show the degraded human face (?) which appears in the Sydney Museum specimen.

Of the shell rings used by the natives of the islands of the New Georgia group (comprising Narovo, Simbo, Ronongo, Vekavekala, Kolobangara, Rendova, Vangunu and New Georgia), as ornaments or articles of barter, I know of the following varieties :—

Hinu-ili are small rings of little value but frequently worn as ornaments. Five examples are shown in Fig. 3.

Hokata.—Thin rings of tridacna shell, worn as armlets. Examples may be seen in Fig. 1.

Poata.—Fig. 4. Heavy thick rings of tridacna shell used as articles of barter.

Bareke.—Roughly made rings of tridacna shell used as articles of barter. I believe that these are not made at the present day, the more neatly made "poata" having taken their place.

Bakeha.—Used as articles of barter, and when mounted as shown in Fig. 6, worn as ornaments. The ring at the base of Fig. 3 appears to be an unmounted Bakeha. The yellow mark referred to by Messrs. Edge-Partington and Joyce is a *sine quâ non* in a bakeha and occurs only in fossil tridacna shells. I think a mistake has occurred in describing the small teeth round the edge of Fig. 6 as bats' teeth. I believe them to be the teeth of the small marsupial opossum (*Cuscus orientalis*). A reference to the specimen in the museum will easily settle the point.

Hokata and Poata are used for buying food, packets of dried almonds (bomboro), &c. Bareke for the same purpose and for buying shields of basket work (lave). Bakeha, the price of men and women.

Their relative value may be taken as follows :—One Bakeha equals two Poata and twenty Hokata. A Bareke seems to be rather more valuable than a Poata. . . .

The extremely beautiful ornaments composed of flat discs of thin tridacna shell overlaid with a revolving disc of the most delicate tortoiseshell fretwork are known as "Dala." I am informed that they are made only on the island of Ronongo and are valued at two Bakehas.

Formerly the large tridacna shells used for making rings and ornaments were, after they had been ground down to the proper shape and thickness, pierced by chipping a hole and the centres were then cut out with the aid of vegetable fibre and sand. At the present day a piece of iron wire is used instead of the fibre, but the process is still a long and laborious one. CHARLES M. WOODFORD.

Africa, East. **Hobley.**

Further Notes on the El Dorobo or Ogglek. *By C. W. Hobley, C.M.G., Assoc.M.Inst.C.E.* **21**

In MAN, 1903, 17, a few notes on these elusive people were published. Since that time the writer has been fortunate to twice come into contact with members of the tribe in different parts of East Africa : once on the occasion of a visit to Eldama Ravine, and recently during a tour through the Laikipia Plateau west of Mount Kenia.

The author in 1891 visited Mount Kenia, and while encamped on the lower slopes encountered a few specimens of a bearded race of men who were said to live in the

depths of the forests on that mountain. The incident was referred to in a description of the journey in the *Proceedings of the Royal Geographical Society*, August 1892 and August 1894. During thirteen long years nothing was heard of these people, nor does any other traveller seem to have referred to them; it was therefore with some interest that a representative of these people was discovered in a Dorobo colony found on the north-east side of the Aberdare range in the vicinity of Pēs swamp, and it was then elucidated that the bearded people are the Digiri clan of the Oggiek tribe, and that they acknowledge as their ruler a chieftainess named Ongiboro who lives near Nyeri Sta. She is married to one Sikirai, who is also said to be one of the bearded people. Needless to remark, the possession of beards and their acknowledgment of a female ruler are features of great rarity in Central Africa. Although the information is still very scanty, it has been considered advisable to communicate it in the hopes that it may prove an incentive to further research. I append short comparative vocabularies of these dialects of the Oggiek language, and at the same time give in separate columns the Nandi and Masai equivalents for purpose of comparison. It will at once be seen that some words are the same in Oggiek language as Nandi, and other words are the same as Masai. At first sight it might appear that the Oggiek had borrowed these words from Nandi and Masai, but it is rather remarkable to find the Digiri clan of Oggiek, whose great haunt is the Kenia forest, using many Nandi words when practically the only languages spoken in that region are Masai and Kikuyu.

They all speak Masai because there are a number of poor Masai living among them—people who lost all their cattle in the plague of 1891 and after that took to a hunting life. It therefore seems to me highly probable that the so-called Nandi words used by the Digiri people may be true Oggiek words gradually borrowed by the Nandi and now incorporated with the Nandi language; in the same way a few Oggiek roots may have become incorporated with Masai. The subject is one of great interest, and it is to be regretted that our opportunities of studying these people are so infrequent.

The following is a list of the Oggiek clans:—

Clan.	Chief.	Clan.	Chief.
Oggiek of Kamililo or Tinderit - -	Kipsangñan.	Oggiek on the Mau range, west of Nakuru - - -	Kipkurerek.
Oggiek, east of Lumbwa country - -	Pikabom.	Do. do. -	Kamiek.
Oggiek in Eldama Ravine - - -	Kakimengiriu.	Oggiek, south-west Kenia and also Pēs swamp - - -	Digiri.
Oggiek, north of Kenia - - -	Sisiwek.	Oggiek of Kisima, north of EuasoNyiro	Lalariok.
Oggiek of Loldiani -	Kaivatet.	Oggiek, south of Ndabibi plain, south-west of Naivasha -	Saleta.
Oggiek on the Mau range, west of Nakuru - - -	Chibcharwanek.		

The head Laibon of the Oggiek is said to be one Lamondo, who lives with the Masai at Ngong lol Mariko, a hill in the region of the Lower Kedong.

The Digiri have a chieftainess named Ongiboro who is said to live near Nyeri or Kakerys in North Kikuyu. I would mention that I am indebted to Mr. A. C. Hollis for the Masai equivalents in the vocabulary.

—	Dorobo of Tinderet (E. Nandi).	Dorobo of Ravine.	Dorobo of Ndoro (Digiri).	Nandi.	Masai.
Above	—	tururet	—	barak	kaper
All	—	eruet	tukul	tukul	pôki, pôkin
Animal	—	mugurorit	painiek	tiondo	en-giriñgo (pl., 'n-giri)
Arm	kursto	kursto	ecot	ecot	eng-aina
Arrows	kibosagas	iat	—	kortet	'm-baa (s. em-bae)
Ashes	—	kibche bongoi	olimwa	orek	'n-guruon
Axe	—	aiwet	—	aiwet	en-dolu
Baboon	konokchot	elkaldas	elkaldas	moset	ol-kaldes, ol-tulal
Back	—	ngorionet	soet	patet	eng-oriofig
Bad	keleya	oorit	rigai	ya	torono (pl. torok)
Bathe	—	kobiri (pek)	—	—	a-isuj-a (inf.), i'-suj-ayu (imp.)
Beads	—	olalariot and sonaiya	—	soniek	—
Beard	ulmunyeit	putek	butiek	tamnet	ol-munyei
Bee	lotorochiek	lotoro	erikairui	segemya	ol-otoroki (pl., 'l-otorok)
Belly	—	—	maiet	maiet	eng-oshoghe
Below	—	ngwon	anare	ingnwin	abori
Bird	ulgwenyet	ngwenyat	nderri	taretyet	ol-mōtōnyi, en-daritiki
Black	—	toh	miiru	tui	orok; narok, nerok
Blood	olodoit	—	—	korotik	o-sarge
Bone	korwet	oloitit	kawit	korwet	ol-oito
Bow	iangda	kwianda	kwianda	kwanget	eng-áno
Brass wire	saugoit	—	—	taiet	o soyai (?)
Brother	notubche	lianashet	lianashet	kitubche	ol-alashe (li-alashe, vocative)
Buffalo	kiborakiat	olusuwan	olusuwan	soiet	ol-osowan or ol-osoliwan
Buttocks	—	oitablep	kurumet	kwetiot	il-tuli
Cap	ngirait	—	—	chepkulet	eng-aranda
Chest	—	elgoit	ngoro	takatet	ol-goo
Child (female)	olakimenget	simborokwet	lakwet	chebta	en-dito } en-gerai
Child (male)	olaimuwaranet	werit	werit	lakwet —	en-giyo } en-gerai ol-tito } en-gerai ol-ayoni } en-gerai
Clouds	kabtiluget	—	—	poitek	'ng-atamboi (sing. eng-atamboi)
Cloth	ngowitet	—	—	anget	ol-kila, ol-karasha
Cold	—	kibowut	nguama	nich?	o irobi; na irobi ne-arobi
Colobus	soiret	korortiet	—	—	ol-koroi
Come	ichomon	nyon	nyon	konyo	a-lōtu; aa-pwōnu (inf.), wōu (imp.)
Cooking-pot	kiret	ndeliet	teret	teret	e mōti
Cowrie	usegerik	—	—	—	o-segherai
Cow	koroswek	tenda karasta	teta	iwoget	eñ-giteng lepoñg
Dog	oghta	mogta	wurra	seset	ol-dia
Donkey	—	kelevet	—	sigiriet	o-sighiria
Ear	uchoiet	sagarowet	sagarowet	itit	en-giyok
Earth (red)	gwengenyot	—	—	koret	ol-karia ('n-gulukek = sand, etc.)
Eat	—	kām	—	kām	—
Egg	—	liteito	iyo	koita	e-mōsori
Elephant	emejoli	langaina	kabisho solanjo	beliot	ol-tōme ol-le 'ng-aina ol-chañgito saputk
Eyes	lobtok	soikabko	konde	konda	eng-ofigu (pl., 'ng-onyek)
Father	tata	taiyi	payu	bhabha (own) kwani (another person's)	papa (own) menyi (somebody else's)
Fingers	mugungonek	—	—	moronet	il kimōjik (ol-kimōjino = sing.)
Fire	emaitet	enaitet	mat	mât	én-gima
Firewood	yewiek	kwendet	kwenek	kwenek	il-kâk (*see* tree)
Fish	—	kawiet	molanek	ngiriot	o-singiri
Food	—	singno	ndit	kiomisi	en-daa
Foot	endabisiek	morenet	morenet	kelteves	en-geju
Forest	Sameita	koret	timta	timto	o-sero; en-dim
Fowl	—	taiwet	—	kibongok and ngoket	el-lukungu

—	Dorobo of Tinderet (E. Nandi).	Dorobo of Ravine.	Dorobo of Ndoro (Digiri).	Nandi.	Masai.
Giraffe	tiongangejeya	soyogel	elmauot	ngotio	ol-mēut ol-ōɔdo-kiragata
Go	ichomden	oosh	tabendi	kobe	a-lo ; aapwo (inf.) shomo inno (imp.)
Goat	kibwaiyeinat	kibwoichet	gwariet	aratet	en-gine
Good	sirgño	—	—	kararan	supat
Grass	Seretiot	ujinjiriet	suowek	suswek	il-kujit 'n-gujit
Guinea fowl	—	ngeruseret	ndurugulo	terekekyat	ol-kelesure
Hair	olusait	korocek	putek	sumek	il-papit
Hand	rubeito	eoot	—	eoot	eng-aina
Hartebeest	rogawiet	rogoiwet	kishirmut	—	ol-kondi ol-ojolojola ol-korikor
Head	nduguyait	elokunyiet	metit	metit	el-lughunya
Hide (of an animal)	ultetut	korwaito	niwaita	ngoriet	ol-chōni (pl., 'l-onito)
Hill	olkiwit	koimetet	kelimara	tulwɔt	en-doinyo
Honey	isint	tabtet	komiandet	komiat	en aisho
House	kortibwet	najit	kaita	kōt	eng-aji
Hunt	Sagas	kibendi samak	ngarari	loget	a-ñgor (inf.) ta-ñgor-o (imp.) (e-ñgororc, the hunt)
Iron	kagarek	—	—	korenɔt	e-seghengei
I know	kanash	tibet	kaitori	anget	aiɣōlo
I do not know	kasue	kirigit	maitori	monget	maiyōlo
I want	—	kuno	—	amoch	aīyeu
I do not want	—	—	atanya	momoche	maīyeu
I want to go	—	kuna ogirigiri	—	—	aiyōu nalo (future)
Knife	weset	—	lelim	rotwet	eng-alem
Kudu	—	nasamarai	—	—	e-maalo
Leg	ndabit	chatet	keldet	kielto	en-geju (*see* fut.)
Leopard	abelyetkaia	melindo	abiat	yablanket	ol-keri, ol-ōwaru-keri
Lion	sombit	kibaramiat	abiet	nyetundo	ol-ñgatuny ; ol-lo-'l-masi ; ol-ōwaru-kitok
Man	—	gnetat*	punik (probably plural).	chito or chi (pl. pik).	ol-tuñgani
Man (young)	drwaganek	—	—	—	ol-murani (warrior)
Man (old)	pamongo	—	paysek	—	ol mōruo
Monkey	—	—	nagotok	kereret tisiet	en-dere or en-narok-kutuk (C. viridis-griseo)
Meat	rerende	—	—	pendo	'n-giri (*vide* animal)
Moon Month	endagetit	alabait	arawet	arawet	ol-apa
Mother	engitogit	ngabu	tatu	eyu	yēyo mame (own mother) ñgoto (somebody else's)
Mtama (grain)	kibengerek	muberek	mburuwa	musongek	il-paek (maize)
Nails (finger) (or toe)	silolenicho	lisotogit	—	siet (pl. siok)	'l-oisotok (ol-oisotoo = sing.)
Neck	—	—	moloshet	katit	e-murt
No	—	momi	matinye	achicha	mme
Nose	kwanwangda	seugnetit	seroot	seroot	en-gume
Pua gazelle	kibkeseget	—	—	—	e-rongo ? em-barnao ?
Palm of the hand	—	ndabit	ndabit	rubaito	en-dap
Penis	munyiset	paraput	monyisiet	peretet	en-jabo
Poison (for arrows)	en-damit	—	—	—	e-saiyet
Quickly	—	—	mainavanava	soriki	o-isarisara (to do) (quickly)
Quiver	—	mugtuket	siaka	—	e-mootyan
Rain	oolorīt	eldat	mbura	robta	eng-ai
Rhinoceros	kiptamet	kibeo	kibeo	kibsiriket	e-muny
River	ilosto	oreitit	ruji	ainet	o-reiet ol-keju e-uaso
Road	—	wakta	masangisha	oret	eng-oitoi ; o-regie
Say	chonangno	mamwe	tangalandini	ongololi	a-jo a-iro } inf. te-jo i'-ro } imp.

* Note.—*Gnato* means man in Tho-Luo, the language of the Kavirondo Nilotes.

—	Dorobo of Tinderet (E. Nandi).	Dorobo of Ravine.	Dorobo of Ndoro (Digiri).	Nandi.	Masai.
Serval cat	melilto	—	—	—	—
Shamba	—	mosigoit	musaret	—	en-gurma
Sheep	eldurumet	kechet	aratit	kigiriet	ol-kerr en-gerr
Sime (sword)	wesekto	wesekta	rotwet	rotwet	ol-alem
Sister	simbarogonck	—	—	kitubche	eng-anashe
Snake	tiandop suswek	tiandop suswek	alongojet	erenet	ol-asurai
Spear	kisuruet	tenget	tenget	gnotet	om-bere: e-remet
Stick	sikoniet	—	—	kirukto	e-ñgudi
Stomach	ngaiait	—	—	maiet	eng-oshoghe
Stool	olorignit	—	—	necheret	ol-origha
Sun	—	ongollo	ongollom	asisto	eng-olɔñg
Supreme being	baba-tobiu	—	—	barak	eng aï
Teeth	mumonek	koiwet	kelyet	keldet	'l-ala (ol-alai, sing.)
Thing	—	samak	elimɔto	ke	en-dōki
Tobacco	kipsondit	aloisogwet	tumbatet	tumotet	ol-kumbau, ol-chani
To-day	—	pesion	kawangar	—	loo-'ng onyek taata
To-morrow	—	tun	tangat	mutai	taisere
Tongue	melsit	ngnajabit	lenana	nelebta	ol-ñgejap
Tope antelope	—	kipturgubes	—	—	—
Tree	kebkevet	latiak; also tarokwi	kame	ketit	ol chani; en-jani; ol-chata; en-jata (pl., il-kāk; 'n-gāk)
Vagina	—	kabiniet	—	mugulet	en-gumos
Wart-hog	—	—	elengi	toret (pig)	ol-bitir (pig)
Water	pelen	pelen	pek	pēk	eng-are
Wimbi	ngurumait	bek	—	—	il-paek
Wind	—	kijabet	uoirvo	koristo	en-gijape; en-gisiusiu
Woman	—	ngitoget	koroket	koriket	e-ñgorōyōni; en-gitok
Woman (old)	mureriat	—	—	—	en-dasat; eng-ogho
Woman (young)	tivik	—	—	—	e-siangiki
Work	—	poitit	talaba	apoyisi	en-gias
Yes	—	an	tashama	we	ee; oo; āu
Zebra	oloitigoit	oloserai	ameret	sigiriet ni serat	ol-oitigo

Note.—Since writing the above I have heard from Mr. Arthur Neuman (the author of *Elephant Hunting in East Africa*, and a man whose knowledge of the El Dorobo is unrivalled). He tells me that he has discovered an isolated clan of these hunters in some hills near the Euaso Nyiro, and north of Mount Kenia. These people call themselves the El Mogogodo, and asserted that they were distinct from the Dorobo of Mau.

Mr. Neuman collected a small vocabulary, which I append. I had hoped at the outset of this research to discover that all the gipsy tribes would be found to speak an allied tongue, but must confess that up to now this view does not gather much support.

The following is Mr. Neuman's vocabulary of the language of the Mogogodo :—

Arrow - - Lagh.
Bad - - - Etiteri.
Bird - - - Legei.
Blood - - Sogo.
Note.—In Lur language sogo means bone; in Tho-Luo bone is chogu.
Bone - - - Motsho.
Bow - - - Paha.
Buffalo - - Pihe.
Child (of either sex) - - Loyo.
Boy - - - Kuti.
Come - - Yato.
Cooking pot - Duru.
Cow - - - Gwāt.
Dog - - - Kuhe.
Elephant - - Sogomé.
Father - - Abasi.
Fire - - - Iku.

Foot	Midyi.
Forest	Eisi.
Giraffe	Jangitoiri.
Go	Yiato.
Goat	Ō.
Good	Eritshobosho.
Grass	Ebile.
Hand	Upe.
Hair	Lisiu.
Hide	Hreget.
Hill	Et.
Honey	Seka.
House	Ai.
Knife	Shu.
I know	Ngheno.
(Tho-Luo word for *know* is ngneo.)	
I do not know	Nshahuu.
Lion	Arabe.
Man (old)	Baiyaishi.
Man (young)	Ngoron.
Meat	Yehe.
Mother	Iyute.
Poison	Moriye.
(The tree from which arrow poison is made is called ol morijo in Masai.)	
Rhinoceros	Orse.
River	Nogoi.
Snake	Morhot.
Spear	Tor.
Stomach	Ire.
Sun	Kiso.
Supreme Being	Tieri.
Sword (same as knife).	
Tree	Kedeu.
Water	Antu.
Zebra	Loitiku.
(Masai for zebra is ol-oitigo.)	

C. W. HOBLEY.

Obituary: Howes. Haddon.

Thomas George Bond Howes, LL.D., D.Sc., F.R.S.: born September 7, 1853; died February 4, 1905. 22

By the untimely death of Professor T. G. B. Howes zoology has lost a diligent and enthusiastic worker and a successful teacher. Although he never did any original work in anthropology, Professor Howes evinced an interest in our science, and for some years served on the Council of the Institute. He fully realised the pressing need there is for investigations in the field, and he did all that he could to further work in this direction. The career of Professor Howes was a fine demonstration of the manner in which zeal, conscientiousness, and diligence can conquer initial disadvantages and raise a man to high position in the annals of science. We mourn his loss not merely because an erudite and prolific worker has passed away, but because those who knew him will have lost a warm, unselfish friend, who was honest through and through. Professor Howes literally wore himself out in working for others; his sense of loyalty to the societies to which he belonged caused him to work for them beyond his strength, and his time and knowledge were always at the disposal of his scientific colleagues. It never can be known what he has done for others, freely giving to younger men advice and information and the benefit of his unrivalled knowledge of zoological literature, and infecting them with his enthusiasm and thoroughness.

A. C. HADDON.

REVIEWS.

Africa, West. Partridge.

Cross River Natives. By Charles Partridge, M.A., F.S.A., F.R.G.S., Assistant District Commissioner in South Nigeria. With maps, appendices, and photographs. London: Hutchinson, 1905. Pp. xvi + 332. 23 × 14 cm. Price 12*s.* 6*d.* 23

High up on the Cross River, which rises at the back of the German Cameroons and enters the Gulf of Guinea at the eastern extremity of the Niger Delta, is a hilly region sometimes known as Obubra or Obūbŭra, and sometimes as Afoñbonga. This is the southern part of the country of Atam, and the district under review also lies at the

junction between the main course of the river coming from the south-east and its most important affluent, the Ewayoñ or Aweyoñ. This River Ewayoñ comes almost from due north to enter the Cross River at its most northern extension. Until quite recently its existence was unknown, yet suspected. In 1888 Sir Harry Johnston, returning from three years' consular work in this region, stated that the real Cross River rose far to the north and at no great distance from the Lower Benue, and that in the country of Atam it received an affluent from the south-east and then turned abruptly westwards. His report was based on native information and on the surveys of the Niger Company's officials. But those who maintained that the main Cross River rose—as had been thought since 1843—far away to the south-east, at the back of the German Cameroons, were proved to be in the right. Yet this River Ewayoñ has evidently been an important factor in the history of Negro migrations in this part of West Africa as it has been a road along which northern influence has percolated to the once savage Negroes of the Cross River district. In the country of Atam, Sir Harry Johnston in 1888 noticed among the pure Negro types occasional individuals with a cast of features almost Caucasian—types which have subsequently reminded him of the Hamitic

FIG. 1.—THREE OF THE STONES AT AGBA.
(Reproduced by the courtesy of Messrs. Hutchinson & Co.)

aristocracy of western Uganda. It is evident that these men were the results of Fula and Hausa influence coming from the Benue and the Niger regions—in the course of trade—down the Ewayoñ River to that country of Niger Negroes which borders on Bantu Africa.

The Efik language of Old Calabar is obviously connected with the Ibo dialects of the Lower Niger, and this applies to a lesser extent to most of the languages spoken along the Cross River as far north and east as the country of Atam; but to the south and south-east of the Cross River a Bantu influence is traceable amongst the dialects, though not of a very marked character.

In the book under review there is, properly analysed, a great deal of interesting anthropology, accompanied by admirable photographs. There is much information regarding totemism, initiation ceremonies, fetishes or idols and religious ideas connected with them, dances, and marriage customs. The author lays considerable stress on the sculptured ornamental stones which he found at various villages in this district. Most

of these are carved in rough semblance of men so far as the top of the stone is concerned, which is incised with a sculpture delineating a human (negro) face, though the natural shape of the stone is not materially altered (Fig. 1). The rest of the human figure is almost lost in conventional decorative treatment, a great feature being the navel. The stones appear to have come from the beds of neighbouring rivers and to be blocks of water-smoothed basaltic rock. The incisions are said to have been made with "stones and iron," and the incised monoliths are intended to represent ancestral chiefs. According to native traditions, they have been erected as memorials to dead chiefs for many generations and have played an important part in the local ancestor-worship. The designs on these stones recall markedly the art of Benin. Probably both were derived from the first awakenings of civilisation in the Niger Delta, due to some pre-historic infiltration of the Caucasian (Libyan or Hamite) prior to the irruption of Islam.

The first chapters of this book are not of special interest to anthropologists, though there are a few notes about the fauna which are not without value. But the book is nevertheless a valuable contribution to the little known anthropology of West-Central Africa, and the photographs are admirable. A rather fine specimen ("The strongest man in the district") is illustrated opposite pages 144, 145. Some of the photographs of the "devils" in the religious dances convey the suggestion, which is carried out less markedly in other of these devil costumes in West Africa, that the origin of the "devil" may quite possibly have been the gorilla or "wild man of the woods." Some of the masks worn recall markedly the features of a gorilla, while the mantle of thick fibre or dried grass suggests the long, coarse hair of the gorilla's back and shoulders. H. H. J.

France: Stone Age. **Doigneau.**

Nos Ancêtres primitifs. Par A. Doigneau. Paris: Clavreul, 1905. Pp. 202. 25 × 17 cm. Price 5 francs. **24**

In the compass of 176 pages one cannot expect to find more than a mere sketch of the Stone Age in France, but M. Doigneau would have done more justice to his masters and himself by adopting a smaller type and a smaller scale for the illustrations. Most of the figures are from original implements in his own collection, and in spite of a certain hardness of outline are very welcome, but the reader must feel that *Le Préhistorique*, on which the present volume is evidently based, is an easier book to handle and certainly cheaper in proportion. There is, however, room for both as representatives of the school founded by Gabriel de Mortillet, to whom Dr. Capitan pays a well-deserved tribute in the preface.

The first chapter includes a summary of the pioneer work of the last century that led to the general recognition of a prehistoric Stone Age, and while the great Buffon is quoted to prove his recognition of flint implements as human work, ample credit is given to savants on this side of the Channel: some still among us were the earliest champions of M. Boucher de Perthes nearly half a century ago.

The familiar classification of the palæolithic age in France is here adopted, viz., Chelles, (St. Acheul), Le Moustier, (Solutré), and La Madeleine, the bracketed titles being recognised merely as marking subdivisions or periods of transition. The main periods are based on differences of flint workmanship, fauna, flora, and climate, but the author is careful to add that there was a still earlier period—stretching well back into the Tertiary period—when flint was worked, not by man, but by his predecessor, the *Pithecanthropus*. He boldly accepts Dr. Dubois' discovery in Java as the missing link, and adds that "we know to-day for certain what kind of being made use of the flints of "Otta and Puy-Courny, and it is probable that new discoveries will soon confirm the "data already to hand." It is strange, therefore, that so little is said upon the Eolithic question which has lately been so much to the fore; and it must here be remarked that, even supposing that G. de Mortillet gave them a name and Dr. Rutot subsequently adopted them, eoliths were surely nursed into vigour on *this* side of the Channel.

Another point to which more space might have been devoted, even in an outline of the period, is the strange intermingling of arctic and tropical with temperate fauna during the early Stone Age. Seasonal migration is no doubt the best explanation put forward, but it is not entirely convincing. The author takes the view that there were no domesticated animals in the palæolithic period and that, after all, there was no hiatus between the early and late Stone Ages. This attitude is becoming more general, but the author is on more dangerous ground when he asserts that the short-headed newcomers represented by the neolithic skeletons of Cro-Magnon and Mentone came from an Asiatic home, bringing with them domestic animals and a new civilisation.

It is as well to mention that the original of Fig. 43 (reindeer-antler carving of a mammoth) is in the British Museum, not at St. Germain; and one quotation, in conclusion, may give food for thought: "The condition of their teeth shows that men "in the (cold and damp) Moustier period did not live exclusively on animal flesh, but on "roots and fruits of the earth; and, even apart from his dental system, the character "of his skull and digestive organs suggests that primitive man, like his ancestors in "the warm period, must have been frugivorous, and was only compelled to become "omnivorous by the rigours of the Moustier climate." R. A. S.

Africa and Oceania. Von Luschan.

Anleitung für Ethnographische Beobachtungen und Sammlungen in Afrika und Oceanien. Kgl. Museum für Völkerkunde in Berlin, 1904. Pp. 128. **25** 25 × 16 cm.

The third edition of this excellent *questionnaire*, which was originally issued in the *Mitteilungen von Forschungsreisenden . . . für die deutschen Schutzgebieten*, has just been issued, with a preface by Dr. von Luschan. Readers of MAN will be more interested in his facts than in his questions, more than 900 in number. It may be noted in passing that Totemism, with only nine questions, including one on "sex-totems" and one on "individual totems," and social organisation generally are somewhat unduly neglected. The suggestions for the use of the phonograph are carefully thought out, and no less than three pages out of 112 are devoted to explanations with regard to "cat's cradle," reproduced from MAN.

The chief points, however, to which I wish to call attention are contained in the preface, from which we learn that the Berlin Museum für Völkerkunde has at the present time a staff of no less than six-and-twenty scientific workers. This is, indeed, none too much for the due care of their ethnographical treasures, which have long since filled to overflowing their present quarters, at the least twice the size of the corresponding galleries of the British Museum. Unlike England, Germany recognises her duty to science no less than the practical value of her ethnographical department; the new building for the Ethnographical Museum of Berlin will in very few years be available for the accommodation of their collections, before the English Government even awakes to the fact that the collections in the British Museum require more space for their due appreciation, as well as a larger staff in the Ethnographical Department to deal with them, and an ethnographical series worthy to be compared with similar foreign publications, in which the Department may enshrine the results of their labours.

Some five years ago the Berlin collections from British possessions were seven times as large as those in our national museum, and since then their disproportion has not been decreased. Unless England awakes in no long time to the fact that she is rapidly falling behind in the study of mankind, the unsophisticated savage will have disappeared from the face of the globe, and the collection, which can to-day be brought together at the cost of a few thousands a year, will be unobtainable for love or money.

It is not even pure parsimony that allows England to fall behind her continental rivals. Germany, if she sends out an expedition, does not leave to chance the destiny

of the objects collected by her servants at public expense. All ethnographical objects are the property of the Berlin Museum, freight, packing, and cost price, if any, being the only return which the collector can demand; at the same time a traveller is not left in doubt as to what is expected of him. He receives official instruction as to how many objects of each kind are needed. Duplicates are handed over to other museums on the same terms, and in no case do the collections suffer dispersal or remain in private hands.

In England, on the other hand, from the days of Cook and Beechey to the Benin Expedition of our own time, the men whom the nation pays to perform certain duties are permitted to retain the objects collected in the course of the performance of these duties. These objects cost them perhaps only a fraction of their selling value, at any rate in such cases as the Benin bronzes, only one-fourth of which finds a home in the national museum of the nation whose blood and treasure purchased them, because the funds at the disposal of the Ethnographical Department did not enable them to compete with more fortunate foreign purchasers. But this unearned increment the members of British expeditions are permitted to retain, because the British Government is too supine to care whether the national collections are worthy of the greatest colonial empire the world has ever seen.

As Dr. von Luschan sets forth in his preface, anthropology is a paying business, even from a purely political or mercantile point of view. "Die Unkenntnis der ethno-" graphischen Verhältnisse hat oft genug zu grossen Verlusten an Geld und " Menschenleben geführt . . . die Schaffung von Absatzgebieten ist eine Kunst " und eine Wissenschaft zugleich." Some politicians are anxious that England should learn of the foreigner. Would that England could learn from him that knowledge is power!

N. W. THOMAS.

Tunis. **Hamy.**

Cités et Nécropoles Berbères de l'Enfida, Tunisie Moyenne. Par M. E.-T. Hamy. (Extrait *Du Bulletin de Geographie, historique et descriptive*, No. 1, 1904.) **26**
Paris: Imprimerie Nationale, 1904. 25 × 16 cm. 40 pp. 30 illustrations in text.

A useful and interesting account of the ancient tombs of this particular district, which resemble European dolmens in some respects, but differ from them very much in others. The general arrangement of them has been a chamber 3 or 4 feet long and broad, sunk slightly into the ground or rock, and heaped round with earth up to the level of the capstone on all sides, except where a narrow passage was left through the mound to the chamber; the entrance to the chamber is thought to have been closed with dry masonry; the mound was surrounded by a circular unmortared wall of large stones, like many of those in Scotland, but it was also roofed with large stones laid flat in circles covering it completely up to the capstone; the upper edge of each course projected above and outside the lower edge of the course above it, so that the rains, which are very heavy at times, run into instead of running off from the mounds, and this has caused the ruin of most of them. Borlase (*Dolmens of Ireland*, Figs. 488 and 489) gives a representation of a cairn and dolmen cist at Varzeit, in the island of Samlande in the Baltic, which seem to resemble this Tunisian type, though it may be doubted whether they really do. Professor Hamy compares the Tunisian monument of Henchir-el-Assel, the largest and best preserved of its kind, to the Medraçen and Tombeau de la Chrétienne in Algeria. Some of the mounds contain two, three, or four chambers, each with a separate way cut through the mound to it; these differ so much from the European dolmen tombs that Professor Hamy is perfectly justified in regarding them as a separate class, but it must not be forgotten that the dolmens of Europe have their local varieties also. Mixed with these circular flag-covered tumuli there are tombs cut in the rock with steps leading down to them, which resemble some of the very early Egyptian tombs.

A. L. L.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

SKULL PREPARED FOR PURPOSES OF SORCERY.

ORIGINAL ARTICLES.

New Guinea: Sorcery. With Plate D. Seligmann.

Note on a Skull prepared for purposes of Sorcery, from the Mekeo District, British New Guinea. *By C. G. Seligmann, M.B.* **27**

The accompanying plate represents a skull decked for purposes of sorcery. It was collected by the Daniels Ethnographical Expedition and had originally come from the Mekeo District of British New Guinea. The precise circumstances attending its preparation are unknown, but it was seized in the Mekeo District and sent to Port Moresby, some sixty miles distant, as evidence of the pernicious and deadly sorcery practised in Mekeo. The skull is that of a young adult, probably a female; it must have lain exposed in the jungle for some time previous to its use as a charm, since the roots of various plants can still be seen intertwined in the different *fossæ*, and occupying the interior of the cranium.

As shown in the plate, it is fixed between two split cane uprights, connected by two cross-pieces. Above the last-named is a slender framework of cane hoops, covered with reddened *Broussonetia* bast. In this is supported the skull, resting on the occipital bone, so that the base is presented vertically to the observer.

In this aspect it is taken to resemble a face, the nose being represented by a straight piece of cane attached to the framework, and similarly covered with reddened bast. From the lower extremity of the latter projects a cane loop, through which is thrust a wooden skewer, representing a shell nose-pin. Below this again, also suspended from the framework supporting the skull, is an ornament made of two boars' tusks, fastened root to root by a string lashing. This corresponds to the fighting ornament, called at Port Moresby *musikaka*, which is held in the teeth during a battle. The eyes of this face are formed by the zygomatic *fossæ*, and two thin cane loops on either side represent the ears. A strip of cane is lashed by either end to the two zygomatic arches, and forms an arch over the maxillary portion of the face, the extremities extending back almost as far as the auditory *meatus*. To this arch is attached a dense fringe of human hair and white feathers; tufts of the former are fastened at intervals to the framework supporting the skull, and cover the whole of the frontal and a portion of the parietal bones. Between the skull and the framework at the back, and not shown in the photograph, is thrust a bunch of white cockatoo feathers.

A number of charms are fastened here and there to the pieces of cane which support the skull; most of these consist of bunches of herbs, but there are also a fragment of dead coral, the mandible of a fish, and a water-worn pebble of veined quartz.

As to the purpose of the charm, the natives asserted that it was used to procure the death of an enemy, though they could not explain the method of procedure to compass the desired result. Quartz pebbles, such as that attached to this charm, are themselves considered of deadly potency, and Chalmers has described how in his time one particular quartz crystal was notorious throughout the Waima villages for its death-dealing powers. (*Pioneering in New Guinea*, pp. 311, foll.)

A coconut spathe bag, containing a number of elongated water-worn pebbles, and some fragments of grass charms, was found with the skull. It was asserted by the natives that these stones had some obscure connection with the snake, but I have reasons to believe that they themselves had no strong convictions on this point, at any rate, in the matter of these particular stones. C. G. SELIGMANN.

Australia: Religion. Thomas.

Baiame and the Bell-bird. *A Note on Australian Religion. By N. W. Thomas, M.A.* **28**

Among the many problems suggested by the works of Spencer and Gillen, and particularly by the *Northern Tribes*, is that of the relation between the anthropomorphic

myths and mounds of the Eastern tribes and the animal myths and mounds of the Central tribes. Each group was or is in the habit of preparing for the initiation ceremonies a piece of ground on which the sacred beings were depicted, together with scenes from their mythical history, by mounds of earth. Among the tribes of the south-east the custom is recorded by Eyre,* and earlier still some important facts were recorded of the ceremonies of the Wellington district by Henderson.† He relates that "Piame," who is said to have caused a flood long ago, and is expected to cause another in the future,‡ was represented by a recumbent figure, and that the eyrie of the eagle-hawk, under which guise they figured the evil spirit Mudjegong,§ was also represented. The story was that Piame had many children, but all save two were destroyed by the eagle-hawk.

Among the Urabunna the Wilyaru ceremony commemorates the victory of the bell-bird, *Oreoica cristata*‖ (the name is also given to *Myzantha melanophrys*), over the eagle-hawk, who was formerly a cannibal and destroyed many of mankind. Although the two myths are not identical they are, it is clear, closely connected, and the question arises, is Baiame a sublimated bell-bird, or is the bell-bird a decayed Baiame?

These myths of combats between eagle-hawk and crow or other animals are common all over the south and east of the continent,¶ and on the whole it seems probable that the Baiame element is secondary. Has Baiame, then, developed out of one of these combative crows, or has he replaced one? So far as we can judge, the relation between Punjdel and the eagle-hawk seems to be close, and it is difficult in his case to suppose that the myth has been transformed, because, unlike the Baiame myth quoted above, the animal adversary has not put on human form. The question is not one that can be readily solved, and I will not attempt to solve it here.

It may be noted that the evidence of Henderson, who wrote in 1829 or 1830, completely throws light on Dr. Tylor's theory** that Baiame was a creation of the missionaries between 1830 and 1840. Here we see him figuring as a great magician, indeed, rather than a "high god," in the initiation rites of tribes absolutely untouched at the time, so far as I know, by missionary influence.

In 1837 Macarthur writes,†† that they have a general idea of a creator, himself uncreated, and dance in February and March in honour of Baiame.

An ounce of positive being more valuable than a ton of negative evidence, we might allow the testimony of these two witnesses to outweigh the numerous early denials of the existence of an aboriginal god. But they do not by any means stand alone.

In addition to Henderson and Macarthur we have the reports of the first missionaries. The Wellington Mission was opened early in October, 1832,‡‡ some six months after the missionaries reached New South Wales. A year or so after their arrival at Wellington they record§§ that the blacks had two or three names for the devil but none for God; their expectation of a flood in the future is also recorded.‖‖ Baiame is said to live over the water¶¶ and to have made them all, but this was denied earlier*** ; and they see him in dreams and pray to him (?). The Rev. R. Taylor reports in 1839††† that they believe in three gods—one of whom made all things, another is his son, and the third tells them when to corroboree, appoints their ceremonies, and teaches them their sacred songs. There seems, however, to be some confusion here.

In a MS. vocabulary of the Wirradhuri language as spoken in the Wellington district of New South Wales, Archdeacon Günther makes some remarks on the subject

* II., 236. † *Observations on the Colonies of N. S. Wales and Van Diemen's Land*, p. 144.
‡ *Cf.* J. D. Lang, *Cooksland*, p. 459. § *Cf.* McCombie, *Australian Sketches*, p. 161.
‖ *Horn Expedition*, II., 74. ¶ *Cf.* Mathew, *Eagle-Hawk and Crow*.
** *Journ. Anthr. Inst.*, XXI., 292 *sq.* †† N. S. Wales, II., 301.
‡‡ *Church Miss. Rec.*, 1833. §§ *Ib.* V., 32. ‖‖ *Ib.* VI., 228. ¶¶ *Ib.* 235, 238.
*** *Cf.* Min. of Ev., 3. ††† Parl. Papers, 1844, XXXIV., No. 627, p. 46.

of Baiame.* The book is dated 1839 and contains some 2,500 words ; it must, therefore, have taken some considerable time to collect. Archdeacon Günther had had, therefore, opportunities for learning details of the belief in Baiame and was probably the source of Hale's information. Of Baiame he writes :—

"There is no doubt in my mind that the name Baiamai refers to the Supreme Being, and the ideas entertained by some of the more thoughtful aborigines concerning Him are a remnant of original traditions prevalent among the ancients about the Deity. Baiamai was described to me by one of the most intelligent and thoughtful of the aborigines in the following terms, to give his own simple expressions in English thus :—

"(1.) He lives a great way off from this earth towards sunrising.

"(2.) He has always been sitting down (or living) there, long, long time ago. He never dies.

"(3.) He can do what he likes : when he wants or says anything, it must be done ; if he wants to eat bread or fish, they must come to him.

"(4.) He is very good, he hurts nobody ; he likes the blacks who are good.

"There is also an idea entertained by the more thoughtful that good natives will go to Baiamai when they die.† Nor must I omit to mention that there has been from time to time, *i.e.*, every three or four years, a curious ceremony performed among the blacks, several tribes being assembled, which appeared to be a remnant of some religious rites. A song was sent for the occasion by Baiamai or his son, which was sung by those assembled ; a solemn procession took place, certain mysterious figures painted on pieces of bark of men and other objects were displayed at the time.

"To obtain all the particulars of this ceremony was impossible, as it was to be kept a secret among the aborigines. My informant, as far as he ventured to tell me anything about it, charged me not to mention it to anybody.

"I would further add that the idea of a future state is not quite extinct among them, although some of them speak like infidels and will hear of no hereafter . . ."

He thinks the idea of transmigration is of white origin.‡

Eyre§ mentions (1845) the belief in Biam on the Murrumbidgee and Biam-baitchy on the Murray. He is said to be like a black but deformed ; his deformity results from his sitting cross-legged in his canoe.

The only other reference before the time of Ridley‖ occurs in a report (1852) of the Moravian Missions at Lake Boga¶ "Sometimes instead of answering they showed "us figures cut out of bark which they called *natta*,** possibly a kind of idol or picture "of the devil . . . The good spirit they call pei a mei." On a later page†† we read, "They have some idea of a higher being . . . Peiamei, they say, lives up "above and their magicians taught them that he had created all things ; they have to "placate him by dances . . . They name him also Mahmam-mu-rok, which seems "to mean 'father of all' (*mahmuk* = father)." This is probably the same name as that given by Howitt for the Wotjoballuk in the form Mami-ngorak.‡‡

Dr. Howitt reproduces§§ without comment a statement of Manning's that missionaries did not until many years after 1834 land at Sydney on their way to Moreton Bay and never came to the southern districts (of N S. Wales ?) at any time. This

* Howitt, *Native Tribes*, p. 502, mentions that this exists ; he was, however, unable to find it. *Cf. U. S. Expl. Exp., Ethn*, p. 110.

† *Cf.* N. S. W. Papers, 1845, *Minutes of Evidence*, 937, 3.

‡ There seems no reason to doubt that in some parts a belief in transmigration existed. *Cf* Salvado, *Mémoires hist.*, pp. 162, 260 ; *Minutes, loc. cit.*, Macgillivray, I., 48 : Parker, *Abor.*, p. 25 ; Nicolay, *W. Aust.*, p. 9 ; B. Field, *Geog. Trs.*, p. 467 ; L. Parker, *Leg. Tales*, p. 94 ; Thornton, *Notes* p. 4 ; Backhouse, *Narr.*, p. 431 ; *cf.* Macgillivray, *Voy.*, I., 48.

§ *Journals*, II., 362 ; *cf.* S.A. Parl. Papers, 1860, III., 73. ‖ *See Nature*, X., 521.

¶ *Missionsblatt aus den Brüdergemeinde*, XVII., 100. †† *Ib.*, p. 143.

** Natta = devil, evil spirit. ‡‡ Howitt, p. 491. §§ *Native Tribes*, p. 501.

is entirely erroneous.* Missionaries from the Pacific were at Port Jackson for a short time forty years earlier (1798–1801), and Marsden remained and established his mission at Paramatta in 1815. Threlkeld worked at Newcastle in 1825–6 and at Lake Macquarie in 1826-7, and again from, I believe, 1832 till 1841. There was a native institution at Sydney from 1828 till 1841, at least; the Wellington Mission lasted from 1832 till 1843; the German mission at Moreton Bay was established in 1836. The Moravians went to Australia, I believe, in 1838, and there was certainly a Wesleyan mission at Merri Creek, near Melbourne, for some years, from 1836 onwards. Possibly there were others who have escaped my notice.

Mr. Manning's assertion† is thus utterly wide of the mark. It does not, however, follow that the beliefs of the wild natives were markedly or even at all affected by the work of these missionaries. On the other hand, it seems certain that if Mr. Manning did not himself distort the beliefs of the natives with whom he came in contact in 1844–5, he must have taken his facts from those who had been under Christian influence. From the uncritical character of Mr. Manning's statements we may infer that the former is more probable. However this may be, it is evident that Dr. Tylor's theory of the missionary origin of Baiame between 1830 and 1840 is entirely untenable, and very strong evidence would be necessary to establish even a *primâ facie* case for a non-native origin of a being, who, in the earliest reports, bears such obviously native characteristics, and is in no way contaminated by Christian elements.

The mention of Mudjegong as a being who is present at the *bora* suggests that he is in reality not an evil spirit, but the counterpart of Daramulun. Dr. Howitt has even maintained the same view of Koin. It would, however, take me too far to discuss this here.

One point may, perhaps, be mentioned in conclusion. Good or evil beings—Bunjil, Mudjegong, Mullion, &c.—either bear the name of the evil hawk or are closely associated with it; one of the names of the phratries in the tribes in question is frequently the same as one of these names. It may be no more than a coincidence, but the name of the Urabunna ceremony is Wilyaru, and *welu* or *wilyaru* is the name of a bird—the curlew—from Port Lincoln to some distance north of the Arunta. The Nauo tell a story‡ of how a man who nearly destroyed them was turned into a *welu*. Can we infer from this that the bell-bird in the Urabunna myths is the curlew of other tribes, or that they have substituted the bell-bird for the curlew? Whether this is so or not, it is interesting to note that *welu* and cognate forms seem to be the root of the phratry name of several eight-clan tribes§; the Waagai, Walpari, and Warramunga have Uluuru; the Bingongnia, Wiliuku‖; the Umbaia, Guanji, and Tjingilli, the more remote form Illitchi or Willitchi. But this is no more than a conjecture. N. W. THOMAS.

New Guinea. Seligmann.

Further Note on the Progress of the Cook-Daniels Expedition to New Guinea. *By C. G. Seligmann, M.B.* **29**

The latter part of our stay in New Guinea was devoted to the south-eastern extremity of the Possession, some of its many islands, and the Trobriand group. The natives of the Trobriands, as well as of their "outliers," the far less visited Marshall Bennett group, are totemic, their system presenting the essential features described in my previous letter. As noted by Sir William McGregor, a well-defined system of chief-ship exists in both these groups, but it appeared to Daniels and myself that the authority

* *See Trans. Lond. Miss. Soc.*, IV., 455, &c.; Symons' *Life of Draper*; Backhouse's *Letters*, &c.

† *Journ. Roy. Soc.*, N. S. Wales, 1882.

‡ *Trans. Phil. Inst.*, Vict., V., 194; *cf.* Curr. I., 402.

§ Spencer and Gillen, *Northern Tribes*, pp. 100, 101, 102.

‖ *Ib.* p. 100, the name is given as Illitji, but two pages later Wiliuku occurs in the text. I assume that the latter is right.

of even the big chief of a district was not, and never had been, as great as Sir William thought it. The Marshall Bennett islands are a group of atolls which have been raised some 300 to 600 feet. At Kwaiawata a portion of the densely vegetated seaward cliff face is so steep that ladders (for their own use be it noted) have been constructed by the natives who live in hamlets, each consisting primarily of a portion of a clan, in the central lagoon depression of the island. Here are situated their wonderfully fruitful gardens sheltered alike from the fury of the monsoon and the spindrift from the sea. The folk of these islands were not, and never had been, cannibals, thus differing from the majority of the natives of this district of New Guinea. In this they resemble the inhabitants of Murua, the Woodlarks, with whom they are probably ethnically identical. Both at Murua, Gawa (one of the Marshall Bennetts), and the Trobriands the large built-up canoes are made, which are alike the trading boats and troopships of the archipelagoes of the south-eastern extremity.

While at Murua a visit was paid to Suloga, near which is situated the quarry whence was obtained the stone for the adzes which were traded along the S.E. coast at least as far west as Port Moresby. The inhabitants of the two Suloga villages, whose monopoly the quarry formerly was, have been almost entirely exterminated by one of those mysterious epidemics of which one is constantly hearing in New Guinea. But the beach, on which lived the few survivors, bore evidence of their former importance and activity. For some 400 yards from below low-water mark to the edge of the jungle the sandy beach became stoney, a layer some 4 to 6 inches thick of chips covering the whole area. We later found thinner but more extensive deposits of chips on the hillside on the way to the quarry, and picked up a number of unfinished implements, some of the roughest type and none polished. At the quarry itself we found one of the spherical pebbles with which the stone was worked, and we subsequently traded another. At Wagawaga in Milne Bay, although the usual totemic system obtained, there was a grouping of the clans into two exogamous groups. These groups regulated the extremely ceremonial cannibalism of these people, the corpse being cut up in certain of the stone circles called gahana, which were used for no other purpose. Each clan had such a cannibal gahana, as well as the gahana used as a squatting and deliberating place by the older men of the tribe, but no member of the intermarrying clans might enter each other's cannibal gahana, or partake of the cannibal feast, which might, however, be freely shared with the men of the clans into which a given clan might not marry.

C. G. SELIGMANN.

Obituary: Stolpe.

Read.

Hjalmar Stolpe. Born April 23rd, 1841; died January 27th, 1905.

By C. H. Read, F.S.A.

30

The scientific world is the poorer by the death of Hjalmar Stolpe, the Director of the Ethnographical Museum in Stockholm, who passed away in January of the present year at the age of sixy-four. By his death the Institute loses an Honorary Fellow. His work, both in the field of archæology and in that of ethnography, is of great interest, and there can be no doubt of its permanent value. He was born on the 23rd of April 1841, and was engaged at a fairly early age in antiquarian and ethnological studies, as an assistant in the Swedish Historical Museum. During his employment there he superintended the exploration of the graves in the island of Björkö, where discoveries of considerable importance were made and are described in Stolpe's report. He afterwards became a teacher of archæology in the University of Lund. About the year 1880 he came to London in connection with ethnological studies, and I saw a great deal of him at that time. I did not then know the precise purpose of his studies, nor did I learn until a curious circumstance happened in the year 1891. The London Missionary Society had just transferred their magnificent Pacific collection to

the British Museum, and I was anxious to bring the fact to the public notice. I took the method of dealing with certain types of ornament in the Tahitian and neighbouring islands, and in a few weeks had elaborated a development scheme which I laid before the Institute.* The curious point was that on the very day I was to read this paper I received from Stolpe a far more ample treatment of the same series, but arriving at almost identical results. It appeared in Swedish, but was translated into English by Mrs. Colley March. It was odd that though Stolpe had been working at his theory for ten years or more, he had never spoken of it to me, so that I had unwittingly taken up the identical series. Much later he paid attention to the ornamental motives of the American aborigines, and published his results under the title, *Studier i Amerikansk Ornamentik*—a mine of valuable information and suggestion. His voyage round the world in the *Vanadis* in 1883-85 was of immense value to him in such studies, and led probably to his gradually relinquishing archæology for ethnology, and later to his appointment as Director of the Ethnographical Museum when it was separated from Zoology. He was a most genial man with varied and pleasing gifts, not the least of these being a most beautiful voice, and he often begged to be allowed to substitute a song for a speech at the cheerful banquets which add to the charm of scientific congresses. With such a magnificent frame one would have expected him to exceed the normal span of life. Would that he had! C. H. READ.

Africa. **Lang.**

The Religion of the Fans. *By Andrew Lang.* **31**

In the *Revue de l'Histoire des Religions*, September-October, 1904, M. E. Allégret gives an account of the religious ideas of the Fans. It tends to confirm my own ideas about early religion. M. Allégret has for fifteen years been studying. He began, as inquirers usually do, by asking questions—the wrong method. Then he learned the language, listened, observed, and waited. What he observed was a subdued fetishism—no "idols," no fetish-house, few fetishes hung up at the entrances to villages, no priestly caste, nor wizards by profession. There were tabus, and the ordinary maleficent "sympathetic magic"—burning a man's hair, or clippings of his nails, on purpose to injure him. Second sight exists, and the belief in maleficent ghosts. Prayers and a piece of banana, or a few drops of water, are offered to great trees, rocks, and so forth, and the usual personal fetishes are worn "for luck."

A hideous magical rite, a supper with a corpse, confers invisibility. I do not remember this as practised elsewhere. Ancestors receive prayer and feasts of fish or fowls.

This is the conspicuous aspect of the cult. M. Allégret knew of no other belief till an old chief, pointing to the sunset, asked, "Did not God (*Nzame*) depart that way?" M. Allégret was silent, and the chief continued to ask questions about a god behind the sun. Then M. Allégret in turn asked what he meant, and found that his answers were corroborated by everyone, and by the traditions which are repeated in the evenings. There is a creator, *Nzame*, who dwells in the sky; the idea is dying out, and is most vigorous in the interior. He used to be thought black; since they met Europeans they incline to think him white. There is no cult, only ejaculations in moments of danger: "A Tare Nzame!" "Oh, Father God!" When Nzame is mentioned the name is usually followed by a phrase, *Nzam eng' a ne Mebeghe, Mebeghe Menkwa, Sukama, Mbongwe.*

Of this phrase mythical explanations were given. *Nzame* is the son of *Mebeghe* who is dead, or the son of Mebeghe's wife, Sukame. Others said that all the names were names—"honour-giving names"—of Nzame. M. Allégret says that, in fact, the names are roots no longer used with the same suffixes: *Kwa*, in Menkwa, means "to

* *Journ. Anthr. Inst.*, XXI., p. 139.

judge," *Kusya*, in *Sukama*, is king (*Kam*, to arrange), *Mbongwe* is "Father of Life," but the etymology of traditional names does not often yield trustworthy evidence. The Fans, however, are satisfied with these etymologies. The name Nzame, Nyambi, Assyame, Anyam, &c., is found among all the Bantu peoples whom M. Allégret has observed. The myth is that the being so named once dwelt among them on earth, and left them for the sky because of some offences. Of old he gave them axes and bows. In the same way the Kaitish tribe, reported on by Messrs. Spencer and Gillen, believe in Atnatu, a black self-created being in the sky. He expelled his sons, for disobedience, to earth. "Along with them he let down everything that the black fellow has, spears, boomerangs, tomahawks, clubs, . . . and thus he made the Alcheringa in the Kaitish tribe" (*Northern Tribes of Central Australia*, pp. 498, 499). Mr. Howitt gives many examples of similar "All Fathers."

As among the Kaitish, "their religious ideas have almost no influence on the "ordinary life of the Fans." Nzame is a fading idea, overcome by fetishism and ancestor worship, and, among the Kaitish, the belief in his fatherhood will probably be superseded by the existent belief—that of the Arunta and other tribes—in evolution and re-incarnation. Among the Dieri, Mr. Siebert only found traces, either faint or concealed, of Arawotja, who went about making watercourses, and now lives in the sky.* The Dieri, however, unlike the tribes with belief in re-incarnation, hold that they will go to the sky.†

Everywhere, I think, we find traces of the All Father belief yielding, among the Kaitish, to the Alcheringa and evolutionary hypotheses: among the Fans, to ancestor worship, and apparently extinct among the Arunta and other northern tribes. But only long residence and mastery of the languages can enable inquirers to ascertain the truth.

ANDREW LANG.

Canada: Indians. **Boyle.**

Canadian Indians in 1904. *By David Boyle, Superintendent of the Toronto Museum; Local Correspondent of the Anthropological Institute.* **32**

As may readily be supposed by all who do not take it for granted that our aborigines throughout the Dominion are of "one nation and kindred and people and tongue," and that they are similarly circumstanced, the condition of the Indian varies exceedingly. Those who live near the mouth of the Mackenzie, those of the prairies, and those of the old provinces, differ nearly as much in many respects as do the inhabitants of Italy from the Scandinavians, or as the Orcadians from the Majorcans.

The Report of the Department of Indian Affairs for the year ending June 30th, 1904, is an illustrated volume of more than 600 pages, and contains, as usual, a multitude of facts and figures digested and undigested relating to the state of the "Agencies" in different portions of the Dominion.

From the summary of this information made by Mr. Frank Pedley, Deputy Superintendent of Indian Affairs to the Hon. Clifford Sifton, the Superintendent-General at Ottawa, we learn that in all the provinces, except Ontario, there has been "substantial progress," although in no case has there been "but small perceptible advance towards "the acquisition of the higher spirit of citizenship," although "the standard of "civilisation already reached has been fully maintained."

No doubt the authorities are anxious to put the best face on matters by means of the euphemism in the last quotation, but perhaps it should rather read that the spirit of the Indians is now effectually broken, although everything reasonable is being done to maintain the people in something like comfort.

It is reassuring to be informed that "in the younger provinces, among the bands in "process of civilisation where progress is naturally more noticeable, there has not been

* Howitt, *Native Tribes of South-eastern Australia*, pp. 793, 794. † *Ibid.*, p. 800.

" wanting growth in all the directions which make for independence," and that in the North-west Territories a " stage has been reached at which the able-bodied in the mixed " farming districts have become practically self-supporting."

Many bands, it must be remembered, yet lead as nomadic an existence as the extension of settlements permit, living mainly, if not altogether, on the results of hunting and fishing. When these fail, it is only in the extreme north beyond immediate Government assistance that real suffering ensues.

Nearer to " the front " great care is taken to prevent unscrupulous traders from selling intoxicants on the reserves, although, notwithstanding so much vigilance, we learn from some of the agency reports that the Indian and the whiskey too often come together.

In proof of the contention that the Indians hold their own in the matter of population the following tables of vital statistics are supplied :—

	Births.	Deaths.	Gain.	Loss.
Ontario	565	450	115	—
Quebec	313	196	117	—
Nova Scotia	79	63	16	—
New Brunswick	90	62	28	—
Prince Edward Island	17	13	4	—
British Columbia	778	887	—	109
Manitoba	305	263	42	—
North-west Territories	495	446	49	—
Totals	2,642	2,380	371	109

	Populations.			
	1903.	1904.	Increase.	Decrease.
Ontario	21,093	21,191	98	—
Quebec	11,066	11,149	83	—
Nova Scotia	1,930	1,998	68	—
New Brunswick	1,699	1,694	—	5
Prince Edward Isla	301	292	—	9
British Columbia	25,582	25,234	—	348
Manitoba	6,829	6,775	—	54
North-west Territories	17,649	17,561	—	88
Beyond Treaty limits	22,084	22,084	—	—
Totals	108,233	107,978	249	504

The Deputy Superintendent further on refers to the common belief " that the Indian is a dying race," a belief he calls in question. At most, it is to be feared that the Indians just hold their own in point of number, but it cannot be doubted that miscegenation as well as disease is slowly doing its work. As is pointed out in the report, there is assuredly a tendency on the part of some bands to disappear, and it is admitted " that there is " prevalent among the Indians a scrofulous condition which predisposes them to mesenteric

" consumption, and still more to phthisis and other pulmonary, bronchial, and catarrhal " affections," and reference is made to the " first effect of civilization " connected with the change from comparatively open wigwams and teepees to little, overcrowded, dark, and ill- " ventilated houses . . . aggravated by unclean habits and promiscuous expectora- " tion." These reasons are certainly good as far as they go, but there is surely some more subtle, deep-lying cause than is here assigned for the decrease or the stagnation in number. It would almost seem as if, not seldom, the very proximity and occasional contact of the white man had something to do with this, just as we know respecting the maleficent effects produced by the appearance of strangers among insular populations, *e.g.*, in St. Kilda, and, as Darwin has pointed out was the case in some Patagonian islands and mainland districts, to say nothing of what occurs among certain breeds of sheep in the south of England.

The most excessive death rate occurred in British Columbia, and is attributed to the crowding together of the people at potlaches, and probably, too, at other ceremonial gatherings, but this is just what they have always done. In some districts small-pox seldom quite disappears, but its effects seem to be less fatal than formerly. Other diseases mentioned are whooping-cough, measles, and scarlet fever.

As farmers, our Indians are not great successes. The jump from the nomad to the fixed life was too sudden and too wide. It might have proved advantageous had it been possible to make the Indian first a rancher—a stock raiser—but it is easier to suggest this than to devise a way of making the experiment.

The accompanying table, which might be far worse, will serve to give a good idea of our dusky brothers' standing as agriculturists and stock-raisers :—

	Population.	Acres.	Horned Stock.	Horses.
Ontario - - - -	21,191	18,006	6,558	3,632
Quebec - - - -	11,149	4,601	2,019	763
Nova Scotia - - - -	1,998	140	296	59
New Brunswick - - - -	1,694	622	48	12
Prince Edward Island - - -	292	69	—	—
British Columbia - - - -	25,234	8,675	7,575	15,276
Manitoba - - - - -	6,775	1,024	2,479	646
North-west Territories - - -	17,561	11,961	18,852	12,247

Here and there on the Six Nation and Mississauga Reserves excellent results may be seen, quite equal, indeed, to the best of those achieved by adjoining white settlers. On these reserves, also, are held very creditable agricultural exhibitions, in which fully as much interest is shown as the average fair in any part of Ontario.

In the other provinces less interest is exhibited in farming. The Quebec Indians take to lumbering and some minor industries, while in the north-west more attention is paid to live stock than in any other part of the Dominion. It is mentioned that the Piegans, a band which not long ago refused to take cattle on any consideration, have recently built eleven miles of wire fence as an enclosure for herds.

The farm produce of last year amounted in Ontario to the value of 330,986 dollars ; in Quebec, 115,410 ; in British Columbia, 295,000 ; and in Manitoba and the North-west Territories to 339,676 dollars.

Indian fishing and hunting results give us for the Dominion a total of more than $1,000,000, while from other industries a sum exceeding $600,000 was earned.

Very few Indians live in our cities and larger towns, and it is even seldom that we find them in villages among white people. They prefer living in communities of their

own, and in winter, when not engaged in hunting or in the lumber camps, they make lacrosse sticks, axe and fork handles, whip handles, and split black ash for baskets, while the women knit, do bead work, make fancy baskets, and knick-knacks of various kinds in birch bark ornamented by dyed porcupine quills.

Considerable attention is paid by the Government to the education of the children, but few of them even go beyond the rudiments.

Not many of the old people are fond of education, and in too many cases the teachers employed are not of the kind to induce children to attend school. DAVID BOYLE.

REVIEWS.

Uganda. **Cunningham.**

Uganda and its Peoples. By J. F. Cunningham, F.R.G.S., F.Z.S. (Secretary to the Uganda Administration). London : Hutchinson, 1905. Pp. xxix + 370. 26 × 18 cm. Price 24*s*. **33**

Undoubtedly the first impression derived from turning over the leaves of this remarkable book is delight in the beautiful photographic pictures which adorn almost every page. Messrs. Hutchinson have of late brought out a number of works dealing with Africa and Asia remarkable for their illustrations derived from "unfaked" photographs ; but we question whether any one of them is superior in this respect to the book of which Mr. Cunningham has been both author and illustrator. From its pictures alone the book has great educational value. It illustrates in the main the races of the western part of the Uganda Protectorate, but it gives also a number of pictures of remarkable beasts, birds, and reptiles, and some charming bits of Uganda scenery. We would especially single out for remark the following illustrations :—"Sese Canoes," p. 81 ; "A Temple of the Domestic God," p. 102. (This illustrates a remarkable incident, a woman making an offering of wild flowers to the shrine of the village ancestral spirit. It is rare that the Negro in his life takes any notice of the glory in colour of his wild flowers) ; "Baganda Ferrymen," p. 176 ; "An Ant-Eater (*Manis*)," p. 184 ; "The Demon Crocodile," p. 188 ; "The Incense Tree," p. 198 ; "A Water-Lily Creek, Entebbe," p. 207 ; "The *Mwesi*, or Blacksmith," p. 211 ; "The Flute-player," p. 213 ; "A Sudanese Market Girl," p. 223 ; "A Devil Hut," p. 265 ; "Mziba Making Fire," p. 294 ; "Burial of Mtatembwa," p. 297.

A great deal of accurate information is given in this work on the folklore and customs of the indigenous races of the Uganda Protectorate. The former method of burial of the Unyoro kings is described as follows :—

"A circular pit was dug, not more than 5 feet in diameter, and about 12 feet deep. The king's bodyguard seized the first nine Unyoro men they met and threw them alive into the pit. Then the dead body of the king was rolled in bark-cloth, and the skin of a cow, newly killed, wrapped round it and sewn. This bundle was then lowered in the midst of the nine men in the pit. No clay was filled in, but another cow-skin was stretched tight across the opening and pegged down all round. A covering of grass was then neatly laid over the skin, and the multitude who were present at the funeral set to work at once to build a temple over the grave. A headman was appointed as watcher, and very many of the personal servants of the deceased were appointed to live in the temple and their descendants after them. It was the duty of the surrounding country to see that they were supplied with food.

"Oh, the horrors of that pit! I defy the imagination to picture anything more ghastly. The old Roman laws contained some horrors, but nothing so intensely revolting. Constantine (A.D. 318) enacted that if a father slew his son he should suffer the death of a parricide ; that is, to be tied up in a sack with a viper, a cock, and an ape, and be thrown into water and drowned. But this was practically an instantaneous death, and

besides, it must be remembered that it was a punishment for an atrocious crime; whereas in that Unyoro pit the victims must have lived for at least two or three days, and probably devoured the king's body first and each other afterwards."

Mr. Cunningham gives several interesting Unyoro traditions relating the arrival in these negro countries of the great lakes of a now deified civilizer from the north. This fabled white man is sometimes called *Wamala*, and one tradition asserts that he arrived in a canoe from Lake Kioga. He was of either Egyptian or Gala race. Wamala in the folklore of kindred people becomes *Kintu*, and is also known under several other designations which are given in my book on Uganda. Among other interesting examples of folklore is one on the origin of the rainbow. There is also an amusing title on p. 41 entitled "Curing a Swindler."

A good deal more interesting information is given about the people of the province of Buddu that can be found in any previous work dealing with Uganda.

The following is an amusing story from Uganda folklore given in the exact words in which it was described by a native of Uganda called Timoteo. (Timoteo has become a printer, and this fact, together with the excellent English of the story, shows the rapid advance of education in Uganda.)

The Iron Man.

In the old days the King asked Walukaga, the head of the blacksmiths, to make an iron man—a man with blood, real, to talk and walk and have sense.

"Here is the material," said the King, and he threw a number of bars at the blacksmith.

"I supply the material," said the King.

Walukaga went away, taking the bars with him, and he told every one the difficult task: and asked their advice. All shook their heads, no one knew how it could be done.

"Why not give it up?" asked one.

"I cannot, because I have not yet tried; and to go to the King and say I give it up before I have tried would be impertinent."

"Very good, go on thinking it out," they said.

From that time for many days Walukaga spent his time thinking it out and asking advice, but without result.

One day he met a madman who had been sleeping in the fields, homeless; and when the matter was explained to him he said, "Does the King supply the material?"

"Yes, he supplies all but the workmanship."

"Has he supplied the charcoal and water?"

"Not yet."

"Go back and tell him you want special charcoal and special water to work a man in iron. Wood charcoal and lake water are good for making hoes and knives, but to make a man it is different. Tell him you want one hundred loads of the carbon of burnt human hair, and ten pots of tears to sprinkle the charcoal."

The blacksmith returned to the King and told him, and the King issued an order to have every rib of hair in Uganda shaven off or pulled out, and every eye was to weep a quarter of a glass of tears.

There was a great shaving season in Uganda, the big and the little, the young and the old, the boy and the girl, the man and the woman—every one who had a hair on his head or a hair on his face cut it off or pulled it out; and when all was brought together and burnt there was not even one load of charcoal.

The King was not to be easily defeated, so he ordered another shave, and the result was even less than before.

And the tears would not fill a thimble.

The King saw it was not to be done, so he called the blacksmith and said he could not supply the amount of charcoal or tears, and the contract was withdrawn.

The blacksmith said on his way home, "Wokubiro omulalu mu kyama nga ayogera obulungi gwolabye;" or, "A madman often says a good thing. Even a fool may assist you sometimes." TIMOTEO, printer.

This book will be indispensable to students of African anthropology and folklore.

H. H. JOHNSTON.

Fiji. **Fison.**

Tales of Old Fiji. By Lorimer Fison. London: Alexander Moring, Ltd., 1904. Pp. 45+175. 26×16 cm. Price 7*s.* 6*d.* **34**

If Mr. Fison's tales of Old Fiji were designed only as a peg on which to hang an introductory study of phases of Fijian life which have long passed away, their publication is amply justified, for, to say the truth, the introduction will strike many readers as being worth all the tales put together. With one exception the stories cannot be said to be concerned with the real Fijians, but with the people of the Lau sub-group, who, long before the Tongan conquest under Ma'afu, were so crossed with Polynesian blood that their mythology and folklore had ceased to be Fijian. These islanders have been so little studied that their history, as told by themselves, ought to have a scientific value, but Dr. Fison appears to have aimed at presenting them in a literary rather than a scientific form. Probably with Taliaitubou—the titular Tui Nayau—as his original no other form was possible, for that lively old gentleman was famous for his works of imagination, and "a thing was always bigger when it came out of his mouth than when it went in at his ears." His tales, there-

SAMOAN GIRL DRESSED FOR THE CLUB DANCE.
Reproduced by the courtesy of Messrs. Alexander Moring, Ltd.

fore, are specimens of Fijian literature, of which half may be tradition, and the remainder lively fiction. The tale of how the chiefs of Lakemba came to take their title from Nayau is tradition unadorned; in the adventures of Matandua we have old Taliai-tubou's imagination in its full richness, so that one wonders how so bald and abridged a version of the familiar tale of Ndengei and his Awakener could have proceeded from the same lips. The fable of "How the mosquitos came to Oneata" is, perhaps, the most interesting in the collection for the light it throws on the Fijian sense of humour—the one touch of human kinship in these tales, for in Fijian stories we may search in vain for pathos, for the sorrow of parting, for the sense of beauty in nature, for quiet and unobtrusive heroism. Heroic adventure of gods and men; battle, murder, and sudden death are the themes of Fijian romance.

In the introduction there is a very valuable study of words now obsolete and quite unknown to the younger generation of natives. The words themselves give more details about the customs of cannibalism, strangling of widows, punishments, and ceremonial burial of the living, than are to be found in the pages of Williams and Waterhouse. Lengthy as it is if regarded as an introduction to stories which contain little of any of these customs except cannibalism, it is tantalisingly short, for *Kamilaroi and Kurnai* gave the author no opportunity for imparting his rich store of knowledge about the Fijians. We are, however, surprised to notice that Dr. Fison is beguiled by the fancied similarity between the Fijian *vuaka* and the Spanish *puerco* into thinking that the pig was introduced into the Pacific by the Spaniards, being apparently ignorant that both Mendaña and Quiros found the islands swarming with a native breed of pigs. It is indeed doubtful whether *vuaka* is not an introduced Polynesian word, and that the original Fijian names were not *vore* or *nggo*. *Toa*, for which he suggests a derivation from the Polynesian word for brave, is far more probably onomatopœic in origin, like the Tongan *Moa*, as anyone would guess, who has heard a Fijian calling his fowls at feeding time in exact imitation of the cries of the farmyard.

The book is copiously illustrated with modern photographs and is beautifully printed.

BASIL THOMSON.

Art. **Allen.**

Celtic Art in Pagan and Christian Times. By J. Romilly Allen, F.S.A. ("The Antiquaries' Books.") London: Methuen, 1904. Pp. xviii + 315. **35**
44 plates and many illustrations in the text. 22 × 14 cm. Price 7*s.* 6*d.*

This is an exceedingly interesting and useful book, the fruit of many years' work on the subject with which it deals. The illustrations are well chosen and almost always well executed, and the lists of localities will be of great service to the increasing number of persons desiring to study archæological objects practically, and not merely in the pages of books. As the title infers, the book is divided into two portions, relating respectively to art during Pagan and Christian times. The former period is treated with great fulness, and recent views as to the foreign derivation of various forms—such as the spiral—frequently met with in Celtic ornament are adequately laid before the reader. But it is in the portion dealing with Christian times that perhaps the most novel and interesting passages of the book occur. These contain the views of the author concerning the derivation of the interlacing knotwork which was so much used by scribes and sculptors, and of which such magnificent examples are to be seen in the Book of Kells. This knotwork he derives from plaitwork, and shows very ingeniously that all the various forms can be explained by the existence of *breaks*, to use his term, in what would otherwise have been a continuous piece of plaitwork. These views are illustrated by a very complete series of illustrations showing the effect of breaks in different parts of the interlacement and the knots which result from diverse interruptions in the pattern. Who first devised this method of breaking up a plait is quite unknown, but

from the examination of architectural remains the author concludes that the transition from plaitwork to knotwork took place between the Lombard conquest of Italy under Alboin, in A.D. 563, and the extinction of the Lombard monarchy by Charlemagne, in A.D. 774; possibly during the reigns of Luitprand (A.D. 712-731) and Rachis (A.D. 744), for the name of the former king is mentioned in the inscriptions on the baptistery at Cividale and the ciborium of San Giorgio at Valpolicella, and the latter on the altar at Cividale, and in the objects just mentioned he discovers the earliest examples of the change from plaitwork to knotwork. It is, of course, impossible here to give any fuller explanation of the author's views on this question than what has been said above, but the reader who will take the pains to go through the pages dealing with this subject in Mr. Allen's book, and to work out his ideas with a sheet of paper and a pencil, cannot but be much impressed with the ingenuity of the idea and the completeness with which it has been worked out.

One or two small points still remain for criticism. I cannot see why a pseudo-Gothic adornment on a pre-Christian work of art should be described as a "blasphemous" anticipation of Christian art by the Pagan Celt (p. 151). This seems an almost wilful misuse of an adjective.

Then (p. 164) the account of the presence of three British (bishops)—this word has apparently been accidentally omitted—at the Council of Arles in 314 is described as a "vague and unsatisfactory" statement of the "mythical period." It is quite true that one would like to know more about the three bishops in question, and that the site of one of their sees (Caerleon) is, as Mr. Haverfield has very properly pointed out, somewhat doubtful; but there can be no reasonable doubt that three British bishops, and probably of the names which have come down to us, were really present at a council, of the holding of which there can be no question.

Again (p. 229), I am by no means sure that the doing away of the break in the ring in brooches, such as the well-known Tara example, "must have entirely defeated the "original purpose the brooch was intended to serve." It seems quite easy to understand how it may have been employed for a legitimate—as opposed to a ceremonial—purpose, though not exactly as the penannular examples were used. But these are small points, and if I have mentioned them it is merely to accentuate the interest which I have felt in reading this book. I am sure that those interested in the derivation of design will read its pages with great attention and great advantage.

BERTRAM C. A. WINDLE.

Madagascar. **Van Gennep.**

Tabou et Totémisme à Madagascar. Étude descriptive et théorique par Arnold van Gennep. Bibliothèque de l'École des Hautes Études, Vol. XVII. Paris: Leroux, 1904. Pp. 363. 25 × 17 cm. **36**

If the most urgent duty of anthropologists is to collect material, before the advance of civilisation has adulterated the pure native product, and to hand it down to posterity for science to make of it what it can, it is no less true that the work of analysis must go hand in hand with that of collection in order to show what voids remain to be filled up. The monograph is urgently needed from another point of view also: the enormous piling up of anthropological material, to which, in the absence of complete bibliographies there is no trustworthy guide, render it hopeless for the authors of synthetic works, like the *Golden Bough*, to attempt a complete survey of the various fields whose harvest they would fain reap. M. van Gennep is, therefore, doubly a benefactor when he gives us a careful study of a field hitherto all but unknown.

The first problem in order of logical sequence, if not of time, which every enquirer has to tackle is that of terminology, and it will be well to begin our notice of the book with this theme. The word "tabu" is nearly as hard worked as was the term "totem"

a few years ago; it is doubtless a short and convenient expression, but it is open to question how much is really gained by lumping everything under one head.

Tabu is a Polynesian word, and no harm would result from limiting its application to this area; if we permit it to be used of custom in other parts of the world, we must at any rate make sure that they are analogous. Tabu designates a prohibition to which religious sanctions are attached, and it should not be applied to other kinds of prohibition. It would even be advantageous to limit its use to cases in which the punishment for violation is, so to speak, automatic, the direct result of the discharge of *Mana*.

I cannot, therefore, approve M. van Gennep's extension of the term to cover conjugal fidelity (p. 169). There is no mediate and no immediate religious penalty for adultery; the woman may have to undergo an ordeal, but this is hardly a justification for cataloguing the duty of fidelity as a tabu. Still less can I say with him that the attitude of society towards a leper (p. 56) or other person with a contagious disease is the observation of a tabu.

Again, M. van Gennep's use of sociological terminology leaves something to be desired. We read on p. 136 that both the Antaimorona tribe and each of its component clans is endogamous. It is either meaningless to say the tribe is endogamous or endogamy needs to be defined. Without reading his preceding explanation it is difficult to attach any meaning to the remark on p. 164 that the Sakalava are exogamous with traces of endogamy. All that this means is that there are certain grades of consanguinity within which a man does not usually marry. Exogamy is a term used with reference to totemic and similar restrictions, and only confusion can arise by applying it to restrictions based on terms of relationship. Still greater confusion arises from M. van Gennep's use of the term endogamy to mean freedom to marry inside the kinship group (pp. 164, 309, n. 1) and obligation to do so (pp. 136, 164, 309). I may mention among the terms of which further definition is needed—family (usually=village group, p. 190, but is distinguished from it, p. 212), tribe (p. 220, *cf.* p. 215, where it is made clear that portions only of the tribe are meant).

The term sexual tabu is used as a heading for a chapter in which sexual tabus proper—those which bear on sexual relations—are discussed, and in addition, what may be termed uni-sexual tabus, those imposed on the pregnant woman or the expectant father. Social (p. 26) seems to be used in a double sense; a social tabu is declared to be one which is observed by all, and one the penalties for the violation of which fall on all. Re-incarnation hardly seems a right word to apply (p. 303) to the sojourn of the soul of a dead man in a tree or even in an animal.

These are, of course, points of detail, and diminish but slightly the value of M. van Gennep's monograph. I have, however, insisted on them because, in the first place, nothing is more fatal than indefinite terminology, and, in the second place, it is due to the indefiniteness of our authorities that M. van Gennep finds himself unable to decide between two different theories of the origin of the Malagasy animal superstitions, which occupy so large a part of his space. It was, therefore, specially desirable to make clear to investigators on the spot what facts are wanted and what terms they should use.

It is impossible to deal with a tithe of the interesting points that call for notice; I must therefore limit my remarks to the last, theoretical, chapter. On the whole, in the absence of more definite information, especially on the social organisation, suspense of judgment seems the only possible attitude. It is highly important that there is no native name for the sacred animal, but it is more important to know whether there is any term for the kin which respect it though they do not bear its name (p. 306). Initiation ceremonies (p. 310) have not necessarily much to do with totemism, though the people may be, as in the case of the natives of Australia, almost without exception totemic; I cannot, therefore, attach much importance to this, nor yet to the absence of indication that the animal is the protector of the kin. The endogamy (properly so-

called) of the Malagasy, is certainly a strong *primâ facie* ground for supposing that totemism has nothing to do with the case; we need, however, further information as to rules of descent. In this connection may be mentioned the reports of Vaughan Stevens as to the endogamy of the Sakai (*Z. f. E.*, XXVI., 160) which have, however, never been confirmed.

M. van Gennep offers some criticism of a note of mine in *Folklore*, a mere *obiter dictum*, which I should myself never have dignified by the name of a hypothesis. The criticism would no doubt be justified, had I of set purpose deliberately propounded a series of statements as to Malagasy animal cults. All I did was to state that the Betsileo *seem to be emerging* (M. van Gennep's translation is considerably less guarded) from a state of totemism. Inasmuch as I made this statement in the course of an argument to prove that neither the Bantu in South Africa nor the Betsileo lend support to Mr. Hartland's theory of the transition from totemism to ancestor worship, and as I therefore was mainly concerned to urge that their animal cults are *not* now totemism, I cannot admit the truth of M. van Gennep's charge that I began where I should have ended. It was no part of my object to prove that either Betsileo or Bantu are totemists. I consequently left the question undiscussed.

One or two minor points may be noted. On pp. 36, 161 we have a mention of brother-sister incest in Ceylon. This is, I think, a misconception due to the mistranslation of a term of relationship, which in one language means sister, in another, cousin. Ne . . . pas seems to have been omitted on p. 172, lines 15, 16. Is there any example of a man as a life index (p. 99)? The hunt of the victim (p. 252) may probably be explained as a mode of evading responsibility; the victim which allows itself to be caught is a willing sacrifice. Examples of the hunt are numerous in Europe.

M. van Gennep has done an excellent piece of work and deserves well of his fellow men, not only for the book itself but for its very complete index. It would have been well, however, to give a bibliography of the authors cited; the tiresome citation of full titles on every page would have been avoided; it would have been easier to see how far important documents have been overlooked; and the need of a lengthy search for the reference (*cf.* the reference to Vœltzkow, p. 110, n. 2) would have been avoided in some cases. Moreover, a bibliography based on M. van Gennep's extensive researches cannot but be in itself a contribution to science. N. W. THOMAS.

Egypt. **Budge.**

Cook's Handbook for Egypt and the Sudan. By E. A. Wallis Budge, M.A., Litt.D., &c., &c. London: Thomas Cook and Son, 1905. Pp. 773 and index. Nine maps, 130 illustrations. 17 × 11 cm. Price 10*s.* 6*d.* **37**

A really satisfactory handbook of Egypt was wanted, and Dr. Wallis Budge has compiled an exceedingly clear and comprehensive work for Messrs. Cook and Son, the well-known tourist agents. The volume is admirably adapted to its purpose, and really replaces the old handbook from the same hands, including in addition, "The Nile: Notes for Travellers."

The whole has been revised and re-written. The four parts into which the volume has been divided deal with—first, a connected outline of the history of Egypt, religion, learning, hieroglyphics, &c.; the other three consist of a description of the principal places in the Delta and Nile Valley, the Peninsula of Sinai, and a brief sketch of the Nile Valley from Khartoum to the Great Lakes is appended. The whole is well up to date, and care has been taken to incorporate the recent results of archæological research. Hieroglyphic type has been used where needful with great advantage, and the list of Egyptian gods and kings with their cartouches will be most useful, not only to the tourist, but to those who collect scarabs at home. The maps and plans are also very satisfactory. R. W. F.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

12 MALES.

11 FEMALES.

NEGROID.

26 MALES.

16 FEMALES.

NON-NEGROID.

COMPOSITE PHOTOGRAPHS OF THE NEGROID AND NON-NEGROID GROUPS OF THE ANCIENT INHABITANTS OF THE THEBAÏD.

ORIGINAL ARTICLES.

Egypt: Craniology. With Plate E. Thomson.

Composite Photographs of Early Egyptian Skulls. *By Professor Arthur Thomson, M.A., M.B.* 38

In a recent monograph on the ancient races of the Thebaid,* evidence was adduced to prove that in the earliest known times the inhabitants of this region were composed of individuals of a negroid and a non-negroid stock. This view was supported by the publication of plates in which all the skulls accessible were reproduced on such a scale as to furnish a graphical conspectus of the crania belonging to our negroid and non-negroid groups. It struck me, however, that the value of this evidence might be still further enhanced if we could publish composite photographs of the series. The process, however, was so laborious as to threaten to delay the publication of our memoir, so that it was considered better to make them the matter of a separate communication. The accompanying plate is the result.

The manner of making the photographs may first be explained.

Each skull, oriented in the Frankfort-Munich plane, was photographed under like conditions as to light, exposure, and development. It was, however, necessary to reduce the crania to a common standard of measure, so that large and small skulls might be thereby compared as regards their configuration apart altogether from differences in size. With this object in view two horizontal lines were drawn across the screen of the camera. In every instance care was taken to make the nasion and alveolar point fall exactly on these lines by altering the distance of the camera from the skull. In this way, all the photographs which were taken had as a common measure the naso-alveolar length. Having secured a series of such negatives, they were then combined in pairs. By the judicious use of mesial vertical lines, and lines drawn from these at right angles through the nasion, they were then accurately keyed over one another, the negatives being applied *face* to *face*, so as to bring the film sides in contact and thus ensure accuracy of register. This was rendered possible by the employment of a top light whilst taking the photograph; in consequence the shadows were cast equally over both sides of the skull, so that there was no objection to reversing one of the negatives in the procedure above described. From the negatives so superposed a glass positive of equal size was taken in the camera. A pair of positives was similarly combined, and from them a composite negative of four skulls was obtained. The process was continued by the alternate production of negatives and positives until the final result was reached. The method, though laborious, has this advantage, that more uniformity is obtained in the final composite since the risk of one photograph unduly influencing the series is thereby avoided.

The composite photographs displayed on Plate E. are made up as follows:—

GROUP I.—NEGROID MALES.

Early Predynastic (A 9)†	1
Late Predynastic (B 115, B 125, B 211)	3
I and II Dynasties (D 421, D 415)	2
III and IV Dynasties, Regagnah (R 601, R 617)	2
XVIII Dynasty, Shekh Ali (K 73, K 77, K. 79)	3
XXX Dynasty (L 1)	1
Total in the composite	12

* *The Ancient Races of the Thebaid*, by Arthur Thomson and D. Randall-MacIver. Oxford: Clarendon Press, 1905.

† These numbers refer to the catalogue numbers of the photographs on Plates VI. and VII., *Ancient Races of the Thebaid*.

GROUP II.—NON-NEGROID MALES.

Early Predynastic (A 1, A 11, A 25)	3
Late Predynastic (B 167, B 175, B 213, B 255)	4
I Dynasty (C 511, C 517)	2
I and II Dynasties, Royal Tombs (D 405, D 406, D 408, D 425, D 430)	5
III and IV Dynasties, Regagnah (R 662, R 606, R 610, R 612, R 615, R 616, R 618, R 619)	8
XVIII Dynasty, Shekh Ali (K 11, K 47, K 69)	3
XXX Dynasty (L 7)	1
Total in the composite	26

GROUP I.—NEGROID FEMALES.

Early Predynastic (A 14)	1
Late Predynastic (B 138, B 170)	2
I Dynasty (C 82)	1
I and II Dynasties, Royal Tombs (D 432, D 440)	2
III and IV Dynasties, Regagnah (R 607, R 611, R 613)	3
XVIII Dynasty, Shekh Ali (K 82)	1
XXX Dynasty (L 14)	1
Total in the composite	11

GROUP II.—NON-NEGROID FEMALES.

Early Predynastic (A 20, A 30, A 32, A 50)	4
I Dynasty (C 58, C 64, C 70, C 88, C 94, C 510)	6
I and II Dynasties, Royal Tombs (D 423, D 426, D 428)	3
III and IV Dynasties, Regagnah (R 605)	1
XVIII Dynasty, Shekh Ali (K 80, K 84)	9
Total in the composite	16

It should be clearly understood that the skulls were not specially selected for the purpose of these composites, but include all that were available. The specimens which are absent are either no longer in our possession or else, owing to their friable condition, have been damaged.

As will be noticed, the composite photographs display very characteristic differences in the facial features. Owing to the use of a top light the shadowy outline of the cranial vault does not appear so distinctly as might be desired, but this, as we have already shown, does not affect the result, since we were unable to recognise any distinctions of calvarial form such as would enable us to group the skulls.

It is to the facial features, therefore, that attention must be directed, and the composites may well be left to speak for themselves. They bring out very clearly the differences in the nasal form, the negroid groups, both male and female, displaying a broad nasal aperture as contrasted with the narrower form of the non-negroid groups. So also, the proportions of the upper face are equally well contrasted, whilst the greater interocular width in the negroid skulls compares strikingly with the same diameter in the non-negroid variety.

There seems, too, a characteristic difference in the form of the orbital aperture, the upper orbital edges in the negroid groups being less arched than in the non-negroid class.

It seems to me that after such a graphic demonstration the question of the homogeneity of the early inhabitants of the Thebaid can no longer be maintained. We have here, I think, convincing proof of the co-existence in early times of race stocks with such distinctive characteristics as amply justify us in making a definite pronouncement in favour of the heterogeneity of the large series of skulls which we have examined.

ARTHUR THOMSON.

Borneo. Haddon.

Studies in Bornean Decorative Art: I. Patterns derived from the Roots of the Fig-tree. *By A. C. Haddon, Sc.D., F.R.S.* **39**

As is well known, the Iban, or Sea Dayaks, of Sarawak are very fond of decorating their belongings; the men often paint bold patterns on the walls and doors of their houses, and many of their utensils are carved in a manner that is eminently characteristic of this people. It is somewhat remarkable that the men usually affect patterns derived from plants, whereas the designs employed by the women to decorate their cloths are mainly animal derivatives. Not only are the majority of the motives employed by the one sex entirely different from those in favour with the other, but the treatment of the motives is also quite different. This will be quite evident if we compare the men's designs in Ling Roth's *Natives of Sarawak and British North Borneo* (Vol. I., 393, Vol. II., pp. 28, 186) with the women's designs (Vol. II., pp. 33–36, 50–54).

Fig. 1.

I have in my possession a *bungkan*, or bamboo cylindrical receptacle (Fig. 1) which was used for holding thread used in weaving. It is 328 mm. long and 21 mm. in diameter; the pattern is carved in low relief, and the intaglio is not filled in with the red dragon's blood varnish as is usually the case.

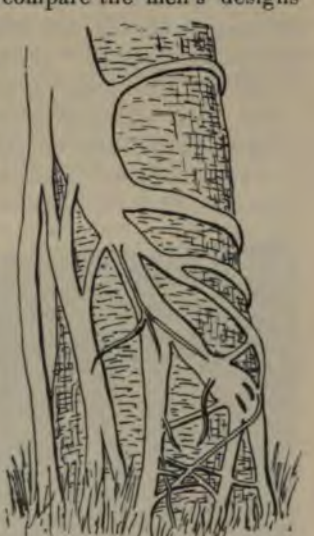


Fig. 2.

The stopper is carved in a moulding and terminal-pointed cone which bear some resemblance to Indian work; the simple central pattern is called *dabong* (a serrated pattern) *leka* (seed) *labu* (pumpkin); a pumpkin-seed pattern occurs occasionally on other objects.

The uppermost pattern of the receptacle itself consists of a series of ovals end on to each other; it is called *entadu* (caterpillar), or *entadu tunggal*. Below this is a flowing pattern named *randau nyarai* (the

nyarai creeper); one informant called it *takang marau*. The same pattern recurs in the centre of the implement. Immediately above this latter is a narrow band of fine cross-hatching, which was described as *ukir pepat*, whereas another said there was no name for it. The narrow pattern below it was called *kaki* (feet) *kimabai* (a kind of centipede) by one man and *sirap kaki* by another. A pattern of concentric half-circles near the lower end was said by both informants to have been copied from the Kayans, and they had no name for it. Below this is a pattern of crescents, which one man called *betisiak* (scaly) and another called *dabong betisik*. The terminal carving was called by both informants *bunga sawi* (flower of the sawi shrub). All the patterns have now been accounted for except the two main ones, and these were unanimously called *kara jangkeit* (or *jangkit*), *i.e.*, the roots of the parasitic fig-tree (Urostigma sp.).

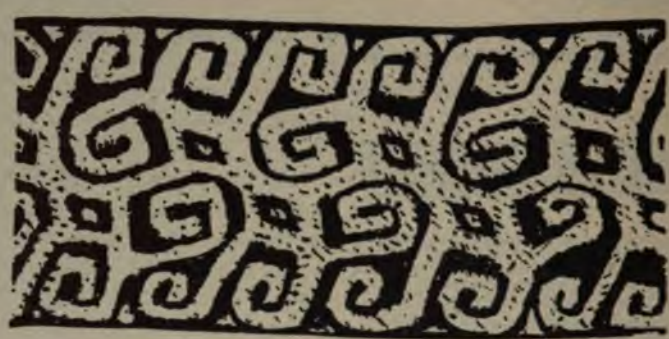


FIG. 3.

Those who have travelled in tropical jungles have often been struck with the suffocating embrace with which these relentless fig trees destroy the hosts which nursed them in their youth. "Brought by some wandering bird or fruit-eating quadruped to the "cleft of a high tree, the seed germinating drops down all round its host long tendril-"like roots, which, in a few seasons, become indissoluable bonds that interlace, grow "together, and close up the tree-stem that gave it support, till its life is choked out, "and only here and there, before it finally disappears, can it be seen through latticed "apertures." (H. O. Forbes, *A Naturalist's Wanderings in the Eastern Archipelago*, 1885, p. 77). This perennial tragedy seems to have appealed also to the native mind, for the interlacing roots have struck their artistic sense. Fig. 2 is a sketch from a photograph I took in a Sarawak jungle of part of the roots of a Urostigma, which shows the characteristic appearance of their growth.

FIG. 4.

Fig. 3 is the central pattern of a *raga tunjang menarang*, or pointed seed basket, made by a Saribas Sea Dayak; the original is in the Sarawak Museum (Museum number, 185) and is figured by Ling Roth, Vol I., p. 364. This pattern is also called *kara jangkeit*. The square spots in the bands above and below this pattern are called *mata* (eyes) *ulat* (grub), and the zigzag is called *lelingkok* (crooked or zigzag).

Also in the same museum (No. 260) is an Iban *pua menyandiek*, or shawl, used for strapping a baby on the back or hip of its mother. Several patterns are embroidered on this handsome shawl, but towards one end we find a variant of the *kara jangkeit* pattern (Fig. 4) with the common *lelingkok* pattern on each side of it. I cannot say for certain, but I should not be surprised if the central pattern in the bamboo receptacle figured by Ling Roth, Vol. I., p. 393, and that on the bamboo quiver, Vol. II., p. 186, were other examples of the same design.

The diamond-shaped designs in the pattern of the other end of the shawl are called *igi nibong* (seeds of the nibong, this is a thorny palm, *Oncosperma tigillaria*); *igi nibong* is also another phrase for *antu pala*, or the smoke-dried head of an enemy taken in war. In this instance the design probably has the former significance. The other large pattern is called *tangkong sapepat* (fire-flies on the tangkong creeper). I have seen several cloths woven by Iban women in which fire-flies enter into the pattern.

A. C. HADDON.

Egypt. Hall.

The Early Occurrence of Iron in Egypt. *By H. R. Hall, M.A.* **40**

In MAN, 1905. 7, Professor Montelius has most courteously signified his dissent from the view which I expressed in MAN, 1903. 86, as to the sporadic early occurrence of *worked* iron in Egypt. Professor Montelius says that he "fully agrees" with me "that iron was rare so lately as the XVIII Dynasty." Certainly I never maintained that iron was in *common* use before the time of the XIX Dynasty, but I do still maintain that worked iron was known to the Egyptians as early as the days of the Old Empire. Professor Montelius does not believe this, and so says, "I cannot "agree with Mr. Hall that my opinion about the first use of iron in Egypt is shown to "be erroneous." May I be allowed to re-state my view on the subject?

The older archæologists all believed that iron was known to the earliest Egyptians. We may leave out of account, for the moment, the arguments about the precise meaning of the word *ba*, which probably originally meant metal in general, though, as "metal of heaven," *ba-n-pet* was iron, and then *ba* alone was used, in a restricted sense, as iron only. One of the chief arguments for the occurrence of iron under the IV Dynasty was the piece from the Great Pyramid now in the British Museum (No. 2433) which I mentioned in MAN, 1903. 86, but which Professor Montelius ignores in MAN, 1905. 7, though when taken in conjunction with the Abydos fragment, which he discusses at considerable length, it is evidence of the first importance.

I do not see how it is possible to ignore the evidence of the contemporaneity of the Great Pyramid fragment with the pyramid which was adduced by its discoverers, except on the supposition that it is a relic of a XXVI Dynasty rebuilding. The author of the rebuilding (*Umbau*) theory as applied to the pyramids, Dr. Borchardt, does not, however, suppose that the Great Pyramid was rebuilt from top to bottom by the Saites, as would have to be supposed were it desired to show that the blocks between which the piece of iron was found were placed in position under the XXVI Dynasty, since they are down one of the air-shafts, and so well inside the mass of the pyramid*. The

* Here is the statement of the actual finder, Mr. J. R. Hill (Vyse, *Pyramids of Gizeh*, i. p. 276): "This is to certify, that the piece of iron found by me near the mouth of the air-passage, in the "southern side of the Great Pyramid of Gizeh, on Friday, May 26th, was taken out by me from an "inner joint, after having removed by blasting the two outer tiers of the stones of the present surface "of the Pyramid; and that no joint or opening of any sort was connected with the above-mentioned "joint, by which the iron could have been placed in it after the original building of the Pyramid." Follow the opinions of Mr. Perring and others, that "the iron must have been left in the joint during "the building of the Pyramid, and that it could not have been inserted afterwards," &c. In *L'Anthropologie*, 1890, p. 31 (*L'Age de Bronze en Egypte*), Professor Montelius mentioned this testimony, but doubted its certainty, because it did not agree with his theory ("des raisons que nous allons développer "donnent droit de douter des conclusions qu'on a tirées de ces découvertes").

complete rebuilding of the Great Pyramid would certainly have been completely beyond the power and means of the Psammetici, nor does Dr. Borchardt believe that anything very much was done by them to it. Professor Petrie has, perhaps, changed his view since then*, but in 1883 (*Pyramids and Temples of Gizeh*[2], p. 85), when discussing the mechanical means used in the building of the pyramids, he wrote as follows: "That "sheet iron was employed, we know, from the fragment found by Howard Vyse in the "masonry of the south air channel, and though some doubt has been thrown on the "piece, merely from its rarity, yet the vouchers for it are very precise, and it has a "cast of a nummulite on the rust of it, proving it to have been buried for ages beside "a block of nummulitic limestone, and therefore to be certainly ancient. No reasonable "doubt can therefore exist about its being really a genuine piece used by the pyramid "masons, and probably such pieces were required to prevent crowbars biting into the "stones, and to ease the action of the rollers." This was very emphatic testimony in favour of the early use of iron in Egypt.

In MAN, 1903. 86, I have already mentioned the fragments of iron of Middle Kingdom date, described by Professor Maspero in the *Guide au Musée de Boulaq*, 1883, p. 296.

In his *Life in Ancient Egypt* (Eng. Trans., p. 461) Professor Erman accepted this evidence, and cited Maspero, as above, and Dr. Birch's edition of Wilkinson's *Ancient Egyptians*, ii. 251 (describing the pyramid fragment) in support.

So far the Egyptologists. In 1888 Professor Montelius attempted to bring the Egyptian evidence as to the early use of metals into line with the European evidence in his article in *Ymer*, the organ of the Swedish Anthropological and Geographical Society, entitled *Bronsåldern i Egypten*. In this article he rejected the evidence for the use of iron in Egypt before about 1500 B.C. (including the Pyramid fragment), thus more or less synchronizing the first appearance of iron in Egypt with its first appearance in Europe. To this article the late Professor Piehl replied in his article, *Bronsålder i Egypten?* in the same periodical, 1888, p. 94 ff. The Egyptologists were evidently largely unconvinced, but the spokesman of European prehistoric science had decided against them, and his authority carried, justly, such weight that the question was shelved until further archæological evidence should be forthcoming.†

It came in 1902, when Professor Petrie discovered at Abydos the find (illustrated in MAN, 1903. 86, and described in the British Museum *Guide to the Antiquities of the Bronze Age in the Department of British and Mediæval Antiquities*, p. 126) of copper objects (a mirror and tools) of the VI Dynasty found with "a lump of hydrated oxide of iron (not metallic)." This iron is now chemically "not metallic," but it shows that an object of iron was buried with these copper objects. And, though the present lump of hydrated oxide of iron may now show no trace of being worked, what reason have we to doubt that the original iron object was not worked? Why should an unworked piece of iron be buried with these copper tools? Is it not more probable that it was a tool or other worked object like the rest, but of iron, not copper?

Evidently preferring to believe that it was not worked, Professor Montelius says (MAN, 1905. 7) that "it does not prove the *use* of iron, only the *existence* of that metal. "And it is well known that iron—meteoric or telluric—existed at that time, as long "before the first man." Certainly, but the proof was hardly needed. I take it that what Professor Montelius meant to say was "it does not prove the *use* of iron, only the *knowledge* of that metal."

---

* *Six Temples*, p. 19.

† As Professor Montelius quotes me (MAN, 1903. 86): "In view of the certainty of the comparatively late appearance of iron in Europe, it was, perhaps, allowable to doubt whether they (the supposed fragments of iron) really dated back to the remote epoch of the Egyptian Old Kingdom."

But if it was known, why should it not have been used? The VI Dynasty piece could be taken to prove that iron was known only, and not used, were it certain that the original iron object was not worked, and did it stand alone. It is not certain that it was not worked, and it does not stand alone. Professor Montelius omits to notice its relation to the other early finds of iron, the Pyramid fragment especially. Even were it demonstrably an unworked lump it would still (since its date is incontestable) go to support the real antiquity of the worked piece from the Great Pyramid. Here are the facts. We find in Egypt a piece of worked iron, to which a date of about 3500 B.C. is assigned on good *primâ facie* grounds, but because iron did not come into general use in Egypt till about 1300 B.C., and in southern Europe till about 1100 B.C., and because we do not possess another piece of iron of the same date, we admit that this early date must be regarded as still *sub judice*. We need corroboration. We afterwards find in Egypt a piece of iron, worked or unworked does not matter to the argument, which is assigned on incontestable grounds to a date of about 3200 B.C. Does not the second find corroborate the first, and are we not justified in assuming that we have erred from excess of caution in denying that iron was not only known to, but occasionally worked by, the Egyptians in the fourth millenium B.C.? And as a matter of fact, as I have said, the probabilities are that the VI Dynasty fragment was originally worked, and not a mere meaningless lump. Why should a mere lump be buried with tools?

This was my point, and I contend that I was justified in saying that Professor Montelius's view is now proved to be erroneous, and that iron was known and sometimes worked in Egypt as far back as the time of the Old Kingdom.* We then see that it is quite possible that the word *ba*, originally "metal" in general, was also used at an early period in the restricted sense of "iron." Piehl's argument from the colour of weapons in early tomb-paintings is certainly open to discussion, but both these arguments about *ba* meaning specifically iron and the blue colour of weapons are now superfluous in presence of the two actual pieces of iron from Abydos and Gîza.

Nor is it inherently improbable that iron was occasionally used in Egypt at an early period, far earlier than in Europe. It seems to be forgotten that Egypt is in Africa, not in Europe, and that arguments from European knowledge do not necessarily hold good for Egypt. I have it on the authority of my colleagues in the Ethnographical Department of the British Museum that many negro tribes have worked iron from time immemorial, and have never passed through a copper age. May not the knowledge of worked iron have reached the Egyptians from inner Africa at a remote period, long before they began generally to abandon copper and bronze for iron (as far as weapons and tools were concerned) about the fourteenth century B.C.? H. R. HALL.

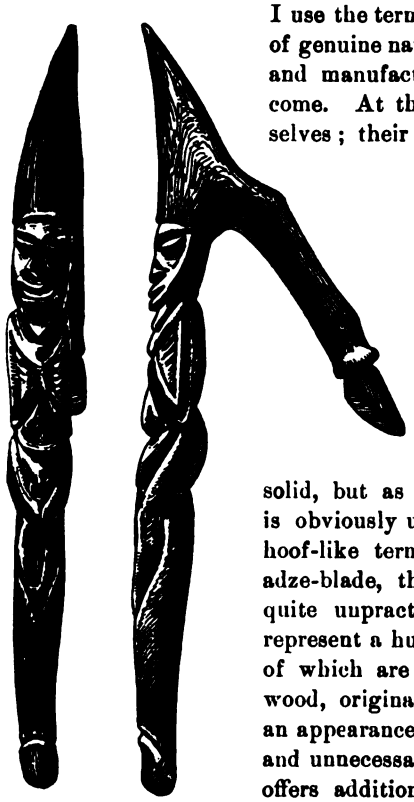
New Hebrides: Forgeries. Edge-Partington.

Note on a Forged Ethnographical Specimen from the New Hebrides. *By J. Edge-Partington.* **41**

I purchased recently at a sale in London the interesting specimen, of which the accompanying figure is an illustration. At first it puzzled me considerably, but I was

* In the light of the Abydos discovery I re-affirm what Professor Erman stated in his *Life in Ancient Egypt*, p. 461. He said: "The fact that iron as well as bronze was used for tools from the time "of the Old Empire, can scarcely any longer be considered as doubtful, for pieces of iron tools have "been found at various places imbedded in masonry of very ancient date. It appears to me, however, "that the bronze tools were always more commonly used, for in the texts bronze is continually "spoken of, while iron is comparatively rarely mentioned." Piehl's conclusion that Egypt was already in the "Iron Age" at the dawn of history ("det Egypten, vi möta vid historiens morgongryning, lefde i jernåldern," *loc. cit.*, p. 101) is, of course, too positive. One does not claim more than that the Bronze Age Egyptians occasionally used worked iron.

fortunate in being able to show it to the Rev. W. H. Edgell, who had recently returned after many years' mission work in this group. He told me that the natives are in the habit of making specimens of this character for no other purpose than to sell to strangers.



I use the term "forgery" for want of a better; the specimens are of genuine native manufacture, and display in the details of art and manufacture the characteristics of the locality whence they come. At the same time they are of no practical use in themselves; their existence, which they owe ultimately to the development of civilised trades, is in fact illogical, except as a means to obtain for their makers certain coveted articles of European manufacture. In a word, they are not what they pretend to be. In a previous note (MAN, 1901. 56) I was able to warn collectors against specimens of a similar disingenuous nature from Fiji, as well as the New Hebrides. The object figured in the present note is a copy of no particular implement, but would appear to be a sort of hybrid between a pig-killing club and a shell adze. Like the former it is cut from the solid, but as the material is a light (in weight) soft wood, it is obviously unsuitable for such a purpose. Again, though the hoof-like termination may well be intended to represent a shell adze-blade, the extreme softness of the wood would render it quite unpractical as a tool. The haft portion is carved to represent a human figure, in true New Hebridean style, the ribs of which are emphasised by streaks of white pigment. The wood, originally pale, has been stained black, doubtless to give an appearance of age, and this fact, together with the obviously and unnecessarily phallic nature of the termination of the handle, offers additional proof that we have here another instance of that class of objects, unhappily increasing year by year, which are deliberately manufactured by the sophisticated savage for trade with the unsophisticated globe-trotter.

J. EDGE-PARTINGTON.

Egypt. Hall.

Palæolithic Implements from the Thebaid: A Note to "Man," 1905, 19. *By H. R. Hall, M.A.* **42**

I should note that the "poignard" in the left lower corner of MAN, 1905, Plate C., is the only object in my collection of palæolithic flints from Thebes which seems as if it might be of much later date than the others. I saw no others on the surface of the Theban desert which might be taken to belong to the modern period: all seemed indubitably of the "Drift" type. In this respect the Theban flints differ from those found by Mr. Seton Karr at the Wadi esh-Shekh, which seem to be of all ages, from the palæolithic period to the XII Dynasty, only 4,000 years ago.

My flints are now exhibited in the Semitic Room (North Gallery) of the British Museum with a number of *coups de poing* and flakes from the Syrian Desert and the Euphrates Valley, brought back by my colleague Mr. R. C. Thompson.

H. R. HALL.

REVIEWS.

Assyria. King.

Studies in Eastern History, I. The Records of the Reign of Tukulti-Ninib I., King of Assyria about 1275 *B.C.* By L. W. King, M.A., F.S.A. London: Luzac & Co., 1904. Pp. xvi + 185. 18 × 12 cm. Price 6*s.* net. 43

The occasion of Mr. King's new volume is the acquisition by the British Museum of a new historical text. The text could easily have been included in the first volume of *Annals of the Kings of Assyria*—if only it had been recovered in time. Its importance made it imperative that it should be rendered accessible without delay. An article in the *Journal* of the Royal Asiatic Society or the "Proceedings" of the Society of Biblical Archæology would, of course, have served the purpose of the scholar—would, in fact, have been the most rapid method to adopt. Why, then, it may be asked, has Mr. King made an independent volume? There can be no doubt about its attractiveness. Probably, however, the real reason was that he saw an opportunity to use the new text in a way more likely to help in stimulating a wider interest in Assyriological research. He does not, indeed, say what kind of readers he has chiefly in view; but he has understood and wisely kept in mind the needs of two classes; the English reader interested in the ancient East, and the beginner in Assyrian, more or less in earnest. As a learner's book the volume will be welcomed. It contains various texts—the new tablet and several related documents—in cuneiform type, with the apparatus of transliteration and translation which other publications of Mr. King have made familiar; it contains the new text and others in autograph facsimile, and it includes legible photographic reproductions of the new tablet. The specialist might have been content with a less prodigal supply of texts and a smaller (and cheaper) book, but, in the form Mr. King has given it, the volume is fitted also to serve as a student's introduction to the study of Babylonian-Assyrian history in the sources. From this point of view the introduction and notes, dealing with subject-matter and palæography, are good. Every one will be grateful for the new collations of certain important passages. The general reader will find what he wants, much of great interest, in the introduction, which, in fact, is roughly half of the book (76 out of 155 printed pages). We hope that this volume, and the series of *Studies in Eastern History* of which it is the first instalment, will do much to encourage in England the study of Assyrian and Assyriology, which seems at last really to be establishing its claim to be a legitimate subject in English Universities.

The main effect of the new text is to increase our sense of the importance of Tukulti-Ninib. In him the advance of Assyria, which, we are now learning, was a longer process than was once supposed, reached a climax; its king became master of Babylon. "I subjugated," he says, "the whole of Shumer and Akkad and set the "frontier of my land at the Lower Sea of the Rising of the Sun" (the Persian Gulf). Unfortunately that is all we are told. How the subject kingdom was administered is not said. The difficult questions in which the history of the period is involved stand, therefore, just where they were—where they were left by the discussions of Winckler, Hommel, Lehmann, Rost, and others. What we need is a document of Ashur-nasir-pal, Adad-shum-usur, or some other of the immediate successors of Tukulti-Ninib. All that the present tablet tells us is that the defeated Babylonian King was carried away, and that his name was really Bi-be(or -til)-a-shu, which name Mr. King now reads (p. 8, n. 4) in the "*Chronicle*, 82–7–4, 38," and in the *Synchronous History*.

From another source, however, Mr. King seems to have added an important datum to those to be taken into account. He offers a happy solution of the riddle of the strange characters on Sennacherib's copy of what has hitherto been known as the seal of Tukulti-Ninib, but must henceforth be called the seal of Shagarakti-Shuriash, a solution which need be none the less King's, even if it should turn out to have been

independently arrived at by Delitzsch : he refers to it (*Mitt. d. Deutsch. Or-gesellsch., December*, 1903), without any reference to King, as the "gewiss sichere Deutung." The importance of the solution lies in the fact that it implies that, as Tukulti-Ninib found a seal bearing the name of a Babylonian king, Shagarakti-Shuriash, he could not himself have preceded that king, as Lehmann would have it. Lehmann, it will be remembered, holds that Tukulti-Ninib's Bibeashu was a son of an earlier king, Shagarakti-Buriash (with B), referred to by Nabunaid. King's reading, in the light of the King List and the Nippur inscriptions seems to remove all uncertainty. The Bibeashu deported by Tukulti-Ninib was son of Shagarakti-Shuriash (with Sh : Nippur), son of Gishammeti. As the plate shows that the name on the seal cannot possibly be read Shagarakti-Buriash (with B), King's ingenious reading and Lehmann's ingenious theory will have in some way to come to terms. King does not himself refer to this effect of his reading of the seal. He discourages attempts to reconcile the *Chronicle* referred to above with the great King List, and recommends awaiting the recovery of more contemporary documents.

The Tukulti-Ninib document itself, then, does not cast much light on the chronological problem. What it really does is to show how Tukulti-Ninib paved the way for his final achievement. Lines 9–27 tell of his successful expeditions to the E., N.W., and N.E. This is new and interesting. The tablet, as Mr. King points out (p. 43), contains not annals proper but records, and the comparison which he naturally makes with the similar, slightly smaller, tablet of Tukulti-Ninib's grandfather, Adad-nirari, showing the advance in the direction of annalistic form (p. 4), makes one hope that later reigns may yet yield real annals.

Naturally about half the document (Rev. line 2 to the end) is devoted to the building operations which were the occasion of the preparation of the tablet which Mr. King tells us was buried by Tukulti-Ninib "as a foundation memorial in, " or under, the wall of the city of Kar-Tukulti-Ninib which was situated near the " Tigris between Kuyunjik and Ḳalá Sherḳât." Mr. King discusses in the introduction, at some length, the archæological question of the object of such tablets as Tukulti-Ninib's. Most of the facts which he collects relate to temples in Egypt. The conclusion to which he comes is that the object of the Egyptian foundation deposits was magical or religious. He rejects Petrie's suggestion—that the models of vessels took the place of real vessels which, having been employed in the foundation ceremony, should themselves have been buried to save them from further use—as not accounting for the inclusion of building materials with deposits. Petrie might, perhaps, reply that surely any surplus material would belong to the same category as the tools. King's own suggestion is that the Egyptian temple is partly a development of a mortuary chapel, and that the deposits were for the use of the deceased after death ; the deposits were connected not with the ceremonies conducted at the foundation but with similar ceremonies the deceased might wish to hold. In contrasting the Babylonian customs Mr. King seems to minimise the significance of the anointing of the tablets, *narê*, mentioned by various kings, which he admits to imply a ceremony. He is clearly right in inferring from the stone *narê* being inscribed on both sides, that they were not fastened to walls, whilst on the other hand the repeated reference to restoring such a tablet to "its place" suggests that they were not exactly left lying. On the other hand, the fact that tablets have been found in coffers need not imply that they were placed there originally. King himself suggests (p. 33) that the box containing the tablet of Nabu-aplu-iddina was centuries younger than the tablet. Adad-nirari, the grandfather of Tukulti-Ninib, utters his curses against anyone who (Rev. lines 20–22) should cover his *narû* with earth, or take it in and set it in a dark place where it could not be seen. So also Tiglath-pileser I., and others. The formulæ are the same as those on landmarks ; but they do not prove that the *narê* were really visible at ordinary times. The constant

references to "seeing" the *narû* may very well mean finding and extricating it, although Nabunaid's stories of painful searching relate not to stone *narê* but to clay *temennê*.

We had marked many of Mr. King's interesting points for reference; but we have already transgressed our limits. There must, of course, be differences of opinion in regard to points of detail in the intrepretation of the texts; but Mr. King's explanation of the obscure passage in *Chronicle*, 82-7-4, 38, line IV, 12; "Tukulti-Ashur, Bel dwelt" for "Tukulti-Ashur-Bel, he dwelt," is one of those things which are obvious—when they are once pointed out. The style of the book sustains the reputation of the publishers, who are doing so much for Assyriology. The few misprints or other inaccuracies that we have noted are such as the reader has no difficulty in correcting for himself.

H. W. HOGG.

Philippine Islands: Craniology. Koeze.

Crania Ethnica Philippinica, ein Beitrag zur Anthropologie der Philippinen. Von G. A. Koeze, mit einleitung von Professor Kollmann, mit 25 Tafeln. Parts III, IV, V. Haarlem: Kleinmann & Co., 1901–1904. 31 × 24 cm. Price 5*s.* each part. **44**

We have in previous numbers of MAN (1901, 149, and 1902, 88) given short abstracts of Parts I and II of Koeze's important memoir on the crania of the natives of the Philippine Islands. The parts now before us complete the work. The author in Part III finishes the description of the skulls of the Tagbanuas, and next proceeds to the consideration of the Mangianen, who inhabit the interior of Mindoro as well as the islands of Romblon and Tablas. They are a half-wild people of Malayan descent. Koeze had only three crania for examination, which generally corresponded with the Visaya skulls. Two well-preserved specimens had a cephalic index 79·2, and all three were hypsicephalic with a vertical index 80. The face in one was leptoprosopic, in another mesoprosopic; the nose was platyrhine.

Two crania of the Quianganen from Banane are stated to be brachycephalic, leptoprosopic, mesorhine, and orthognathic. Three skulls of the Ginaans, from the mountains separating Cagaya from Abra, a wild and warlike people, are dolichocephalic, leptoprosopic, platyrhine, orthognathic. The Balugas from Pangasinan are regarded as a cross between the Malays and Negritos: the cephalic index ranges from 75·1 to 83; the mean vertical index is 78·3; the face is leptoprosopic; the nose mostly platyrhine.

The Tagals are the most important of the Malay stocks in the Philippines, though they showed much intermingling of blood. Sixty-five skulls are described. The mean cubic capacity of the male skulls is 1,455 c.c., that of the women 1,258 c.c. The lowest cephalic index is 71·3, the highest 84·2, the mean 77·4. The lowest length breadth index is 72·1, the highest 82, the mean 77·7. The mean proportion of the face is leptoprosopic. The upper jaw is generally mesognathic. The nose is usually platyrhine.

An important chapter is devoted to the geographical distribution and the ethnographical relations of the Negritos, and to the description of sixty skulls of these people. The collection is, it is believed, the most extensive that has yet been formed. A wide range of variation occurs in the cranial capacity of fifty-one skulls measured; the smallest adult capacity is 940 c.c., the greatest 1,675 c.c. Koeze divides the Negritos into two types, a pygmy type small in stature, in which the cranial capacity is below 1,300 c.c.: and a larger type, with the cranial capacity above 1,300 c.c. One-third of the crania belonged to the pygmy type, one-third to the larger type, and the remainder were transitional. Of fifty-seven skulls measured 90 per cent. were brachycephalic, only 5 per cent. mesocephalic. The cephalic index ranged from 76·8 to 89; the mean of the males was 84·3, of the females 83·9. In only three cases was

the length-height below 75, in 94 per cent. it was higher. For the males the mean was 79·9, for the females 82·1; the skulls were hypsicephalic. The breadth-height index was usually more than 90. The upper face index varied, but for the most part was leptoprosopic; the index ranged from 60·3 to 77·4, with the mean 70·7. The nasal index in thirty cases was below 53, in twenty-four more than 53. The mean was 53·1, on the boundary between mesorhine and platyrhine. The type of face was orthognathic, rarely prognathic. The orbit was usually mesophthalmic, and in the majority the palate was leptostaphylin.

Koeze also describes thirty-nine crania obtained from burials in caves; in Samar, probably Visayas; in Marinduque, probably Tagals; in Busuanga and Peñon de Coron, which corresponded with Tagbanua skulls; in North Mindanao, where it is inhabited by Visayas; in Mindoro, occupied both by Manganians and Tagals; in Sibugay, the inhabitants of which are Visayas. Several skulls, mostly from caves, are described which had been artificially deformed, and cases of artificial treatment of the teeth are referred to. A chapter is given on the anatomical variations recognised in the crania. The races which inhabit the groups of Islands in the East and in Oceania are summarised as follows:—

1. *Malays.*—Hypsibrachycephalic, mesorhine, hypsiconch orbit, scanty smooth hairs, colour of skin clear, stature low.

2. *Indonesian.*—Hypsimesocephalic, mesorhine, mesoconch, scanty smooth hairs, colour of skin darker than in the Malays, stature somewhat greater.

3. *Polynesian.*—Hypsimesocephalic, leptorhine, hypsiconch, more strongly haired, hairs either smooth or wavy, colour of skin yellowish-white to opaque brown, stature high.

4. *Melanesian.*—Hypsidolichocephalic, platyrhine, mesoconch, frizzled hair, stature moderate.

5. *Mikronesian.*—Hypsidolichocephalic or hypsimesocephalic (they are a mixture of Melanesians and Polynesians and show both types).

6. *Negritos.* — Hypsibrachycephalic, leptoprosopic, mesorhine (also sometimes platyrhine), mesoconch (chamæconch), hair frizzled, stature low, colour of skin very dark.

The Negritos are not Papuans, as is proved by the cranial differences. They are neither Malays nor Polynesians and cannot therefore be Mikronesians. They form a special race occupying a place in Oceania long before the arrival of the Malayo-Polynesians. The other races in the Philippines have no relation to the Negritos. The Igorrots are Indonesian; the Visayas also, but with a Malay intermixture; the Tagals also, but with a Polynesian intermixture. It is difficult to place the Tagbanuas and the Guinaans, which are dolichocephalic; perhaps they are Indonesians. Twenty-five plates with numerous figures illustrate the series of five parts. WM. TURNER.

Anthropology. Duckworth.

Studies from the Anthropological Laboratory in the Anatomy School, Cambridge. By W. L. H. Duckworth, M.A. Cambridge: University Press, 1904. Pp. x + 291. 22 × 14 cm. Price 10*s.* net. **45**

In this volume are contained a series of short papers on various subjects which have been composed by Mr. Duckworth during his period of office as lecturer in anthropology at the University of Cambridge. The book is justly dedicated to Professor Macalister, under whose fostering care the school of physical anthropology has grown into its present flourishing condition.

The first paper in the series describes the arrangement of the Craniological Museum at Cambridge, and indicates the wealth of material therein contained.

Brief descriptions such as this of the contents of museums are of the greatest importance to anthropologists, for one of the great troubles of the stay-at-home student, as compared with his brethren in the field, is the difficulty of ascertaining in which particular collections are to be found examples of the particular types he may be desirous of investigating, and it would be a matter of great good fortune if all museums would publish either *resumés* or detailed catalogues of the osteological and other material in their possession.

The second to the sixteenth chapters deal with various features of interest in the morphology of the Primates based on descriptions of specimens and dissections in the anatomical museum.

Of special interest is the account of a fœtus of a gorilla, in which the resemblances and differences from a human fœtus of the same age are discussed in considerable detail, and from which the conclusion is drawn that in their phylogenetic history the precursors of man and of the anthropoid apes diverged from one another at an early stage.

Chapter XIII deals at length with the external appearances and the dissections of the brains of Primates, a branch of comparative anatomy now coming prominently to the foreground. Other articles deal with dissections of various organs and regions of the body in various members of the order of Primates.

Of more interest possibly to those anthropologists who have received a medical training is the chapter on fractures of the long bones met with in various skeletons of the orang-outang from the different collections in the museums of western Europe. These are of the greater importance from the discussion which centred round an exostosis in the femur of *Pithecanthropus erectus*, assigned by different observers to the result of pressure and erosion from an aneurysm or a psoas abscess, to rheumatoid arthritis, and to a disease characterised by osseous deposits in the tendons of muscles known as myositis ossificans. In the present article Mr. Duckworth shows similar appearances can be produced by an overgrowth of callus around the site of a fracture.

The greater part of the book is taken up with exhaustive descriptions and measurements of crania in the University Museum. Each in itself would, of course, be difficult to criticise, and any conclusions which might be drawn would to some extent lack validity from the comparative paucity of material under examination. But such memoirs are of great importance and of absolute necessity, as constituting the spade work for the foundations of future extensions of physical anthropology. But little is available for any one worker; nevertheless, the sum total soon acquires considerable proportions.

The museum at Cambridge is fortunate in possessing specimens from many little-known parts of the globe, and even more so in having a careful and enthusiastic worker ready to hand to at once publish the results and render them available for others, the measurements and descriptions being on the most extensive scale. Almost the last paper in the series deals with the dispersive power of running water on skeletons. The value and bearing of these observations will be at once apparent, for quantities constantly occur in which bones are found at different levels in the bed of a stream, and it has to be decided whether it is possible for these to be derived from one skeleton. Mr. Duckworth found that a small stream in Wales was capable of dispersing the bones of a human body a distance of some 200 feet, the lighter bones being carried furthest. In comparison with this the 45 feet of dispersion demanded by Mr. Dubois for the bones of *Pithecanthropus* in a larger stream and a greater interval of time is not a supposition to be hastily

It is to be hoped that a further series of memoirs from the Cambridge school will shortly be forthcoming, and that Mr. Duckworth may soon receive an equally warm welcome.

F. G.

Votive Offerings. **Andree.**

Votive und Weihegaben des Katholischen Volks in Süddeutschland. Von Richard Andree. Brunswick, 1904. Pp. xviii + 191, with 32 plates. 28 × 23 cm. Price 12 marks. **46**

Certain aspects of modern European life are as worthy the attention of ethnographers as the barbarism of the Pacific or of aboriginal Australia; and Dr. Andree's own researches in Brunswick are well known. In the present imposing volume on votive offerings he has brought together much obscure information that has a special bearing on Roman Catholic Bavaria, but embraces also distant ages and countries in which similar practices existed. In this investigation he has been assisted by a considerable collection, made by his wife, of miscellaneous articles presented at shrines or altars by the orthodox peasantry. The tradition thus perpetuated has its roots in prehistoric times, and may be regarded as the natural outcome of religious feeling when stirred by longing that must be appeased or by gratitude that must be expressed.

The copious material collected is arranged under twenty-five headings conveniently summarised at the beginning of the book; they include such matters as pilgrimages and holy wells, the cult of St. Leonard, offerings of iron, wax, human figures, or models of limbs, pottery, and field utensils, and (generally on a higher plane) of painted tablets. Some of the offerings have been so metamorphosed by continued copying of traditional forms or by lack of skill on the part of the maker, that it would be hard to recognise the true inwardness of countless examples without numerous illustrations. These are provided in thirty-two plates and nearly forty insets in the text, while two coloured plates represent the high-water mark of *ex-voto* production in the eighteenth century. By this means the gradual evolution, or rather degeneration, of stock patterns is made clear, and many grotesque specimens known for what they are. Perhaps the best series from this point of view is that of the lungs, a favourite form of offering among those who suffered in that organ, and pinned their faith to a kind of sympathetic magic. Not the least interesting section of the work is that dealing with the subsequent history and ultimate fate of these miscellaneous offerings which were, and are still, manufactured and dedicated in thousands. Objects of intrinsic worth, such as gold and silver, pass for the most part as coin into the treasury, or figure among the antiquities and works of art composing the treasure of many cathedrals and churches. Perishable materials disappear automatically, and objectionable articles such as discarded bandages and decayed teeth, withered flowers, and tattered garments, would be doubtless removed by the authorities shortly after deposit; but great quantities are burnt at intervals, and where iron, for instance, is the favourite vehicle of one's vows, burial in the vicinity of the shrine is resorted to. In this connection it might be asked whether the extensive *ex-voto* deposits of antiquity, such as those in the mosses of Denmark, were placed in that position by the devotee or subsequently by the authorities of the holy place in which the arms or ornaments were dedicated. The fact that such are generally discovered in a damaged condition would be explicable on either hypothesis.

In the preface Dr. Andree disclaims any attempt to moralise on the facts he has collected. His single aim has been to throw light on a subject not hitherto illumined by methodic treatment, and to preserve for future investigators some account of practices that certainly reflect the mental and moral condition of a large class of the community, and are therefore fair game for the student of anthropology. It only remains to say that the programme laid down by the author has been fully and conscientiously carried out in this pioneer volume. R. A. S.

Philippine Islands. **Meyer.**

Filipino Album III. By Dr. A. B. Meyer. Dresden, 1904. 32 × 26 cm. **47**

The recently issued collection of thirty-seven plates, forming the third series of photographs illustrating the types of natives of the Philippine Islands, published by Dr. A. B. Meyer, is an interesting accession to the fine series of ethnological albums which have from time to time been issued by the able director of the Dresden Museum, and ethnologists will welcome the volume which renders accessible a further series of photographs of types of the Negritos of Luzon, the Manguianes of Mindoro, and the Bagobos of South Mindanao. In addition to examples of the pure-blood types of these groups, some interesting instances are given of hybridization, as, for instance, Manguian-Negrito and Bagobo-Negrito admixtures. In these the hair is markedly curly. The ornaments, weapons—including some interesting varieties of Bagobo shields—and other objects of use are also shown in the photographs, and such fashionable deformations as filed teeth, cicatrization, and perhaps artificial cranial distortion also appear incidentally. The photographs, although they are of rather unequal merit, are on the whole good, and their reproduction has been carefully executed. Dr. Meyer has won recognition as a leading authority upon the ethnology of the Philippine Islands, and upon the Negrito race in general, to the study of which he has devoted much time and attention. Although the text accompanying the plates in the present album is very scanty, being restricted to very brief descriptions of the photographs, he has given full references to the principal publications dealing with the races and peoples referred to, and the plates must be regarded as a useful supplement to the works already published. Dr. Meyer's personal acquaintance with the Philippines dates back to 1872, and his first album of Philippine types was one of the outcomes of his visit. The second album of this series was the result of his collaboration with Dr. Schadenburg, the well-known explorer of this group of islands, by whose death at an early age science was robbed of an active and enthusiastic worker. The newly-published album is based entirely upon negatives taken by Dr. Schadenburg and presented by his widow to the Dresden Museum for publication.

HENRY BALFOUR.

Statistics. **Davenport.**

Statistical Methods, with special reference to Biological Variation. By C. B. Davenport. Second edition. New York, 1904. 17 × 10 cm. Price 6*s.* 6*d.* **48**

This small pocket volume contains all the formulæ and lists of standards and values necessary for the working up of statistics in accordance with the most modern principles, and must be of great value to those fortunate observers who have had a sound mathematical training. It presents the further advantage of giving a complete bibliography of such investigations in biometrics as have received accurate statistical treatment. It is, however, to be regretted that so far no one has written a text book of statistics starting from the very elements without the assumption of any special mathematical aptitude or knowledge on the part of its readers. There are in this country and elsewhere many hundreds of individuals who have laboriously collected facts which they would be only too glad to present in a more accurate form than their present acquaintance with statistical methods permits, and any book which would enable them to do this without having to spend many weeks or months in studying the elements of higher mathematics would be thankfully received. If the present author would undertake such a task he can be assured he would be looked upon as a true benefactor to anthropologists. F. S.

England: Institutions. **Chadwick.**

Studies on Anglo-Saxon Institutions. By H. Munro Chadwick. Cambridge: University Press, 1905. Pp. xiii + 422. 19 × 13 cm. Price 8*s*. **49**

Mr. Chadwick is to be congratulated on having produced a book which should take its place among the standard works on English constitutional history. The amount of labour involved in its preparation must have been tremendous. Not content with referring to the ordinary authorities, Mr. Chadwick has collated practically every document dealing with his subject, and, as a consequence, his book throws a new light on many disputed problems, and must take a high place as a piece of original research. As an example of the labour which the author must have expended, the chapter on the earldoms may be cited, where, to arrive at a conclusion as to the number of earldoms in England, Mr. Chadwick has collated every charter, compared carefully the signatures on each, and, as a result, has been able to prove, so far as such a matter is capable of proof, that in south England, at all events, every county practically was an earldom. It will be patent, therefore, to everyone who reads Mr. Chadwick's book that he must have expended an immense amount of time and labour on its compilation, and the result more than justifies the work. The only criticism is that the book is almost overloaded with detail; but this is, perhaps, inevitable, for Mr. Chadwick is not content with publishing the results of his labours, but gives the arguments as well, and these arguments are essentially and necessarily very detailed.

The first chapter, on the Monetary System, may be said, in a sense, to be the keynote of nearly the whole book. The author has carefully gone into the different standards of value and of money, and into the ratio between gold and silver, and has succeeded in demonstrating the equation of the different values between the different kingdoms. This chapter, therefore, is by way of introduction and explanation to the next sections of the book which deal with the wergelds. Here, again, Mr. Chadwick's industry is much in evidence. He has, needless to say, carefully consulted and compared all documents which could possibly bear on the subject, and, as a result, his conclusions are extremely valuable and interesting. He is enabled to demonstrate that the differences of value in the wergelds of the various kingdoms are due, in many cases, not to any difference in a man's worth, but to differences in the standard of value itself, and it is in this respect especially that his first chapters may be said to be the keynote of the rest. Other chapters of interest are those dealing with the rise of the counties and the growth of the nobility, in all of which Mr. Chadwick has shown the same painstaking and careful work.

Where all is so good it is difficult to find anything to criticise, but we could have wished that the author, when printing Latin, had not written all his *v*'s as *u*'s. It may be more correct, but it is very irritating to find such a phrase as *noua moneta*, and *vero* and *vel* spelt *uero* and *uel*. Again, Mr. Chadwick habitually refers to Charles the Great as Charlemagne. It would also have been an improvement if, as well as giving the references to *Birch's Charters*, the author had also given, where possible, the name of the king and the date. It is not everyone who has a copy of *Birch* by him, and the full significance of the reference may be lost if the date of the charter and its origin are not known.

That all Mr. Chadwick's conclusions will be accepted by the authorities is more than can be expected. For example, his interesting excursus on the council's power to elect and depose kings is, to a great extent, opposed to the accepted theories. But Mr. Chadwick would hardly expect all his conclusions to be passed over without challenge.

In one other matter we have to disagree with Mr. Chadwick. In his preface he lays claim to no "special historical knowledge in venturing upon ground which may be thought to lie outside his own province." His book belies him. H. S. K.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

PLATE F.

BIRD AND HUMAN DESIGNS FROM THE SOLOMON ISLANDS.

ORIGINAL ARTICLES.

Solomon Islands. With Plate F. Balfour.

Bird and Human Designs from the Solomon Islands, illustrating the influence of one design over another. 50

By Henry Balfour, M.A.

In making a comparative study of the varied treatment of the human form in art, both plastic and graphic, observable in the different regions of the world, one cannot but be struck by the fact that in many cases a type which has been arrived at locally by native artists is frequently utterly unlike that of the natives themselves, presenting often strongly-marked and more or less constant features which are by no means characteristic of the peoples of the regions in which these "schools of art" have been developed. One need only cite the peculiar traditional type so characteristic of the well-known wooden carvings of "household gods" in Easter Island, which present a type of human form which has not as yet, I believe, been satisfactorily accounted for.

One of the most striking instances of the perversion of the human features is afforded by the familiar carvings from New Georgia, Rubiana, Florida, and other neighbouring islands of the Solomon group. Predominant among these, in this respect, are the well-known "canoe-prow gods," so called, in which may be seen certain stereotyped peculiarities of facial form, which cannot be referred to the natural type of the Melanesian natives of the group. In these carved figures, of which I give two examples (Figs. 1 and 2), the most striking feature is the extreme *prognathism* usually characterising them, the nose and lower facial region being drawn out into a grotesque and exaggerated snout, frequently to a very marked degree. There is no ethnological justification for this interpretation of the human features, since the natives themselves, although exhibiting sub-nasal prognathism to a moderate extent, are by no means pronounced in this respect, and the nose does not join with the jaw in producing a general prominence of the facial region. One must seek some other cause than that of an attempt to portray native facial characteristics. I do not think that we need look very far for an explanation. In 1893, in my little book upon decorative art,* I made a suggestion as to the manner in which this type may have been arrived at, and in the present article I wish to support the view then stated, by means of fresh evidence from specimens which were not originally at my command.

In the art of the Solomon Islands representations of the human form supply a very frequent theme—one of the commonest, in fact. Another even more prevalent design amongst the coastal tribes is one representing the frigate-bird, which may be realistically or conventionally treated. These two designs, human and frigate-bird, not only occur separately, but also very constantly in close association, as, for example, in the carved wooden bowl shown in Fig. 3. One could multiply indefinitely such instances. Now, one of the most potent factors in upsetting the stability of a given design and creating variations, is the influence which is exerted by one design upon another, where the two are closely and constantly associated. The attributes of one are apt to be grafted upon the other, in some cases, apparently, without special reason, in others there may be special incentives. The instances which I now give will, I hope, show how greatly the human and frigate-bird designs have become entangled, so to speak, and have acted and reacted upon one another. This may have been in part an unconscious process, but I think that it is clear that there were definite reasons why these two designs should influence each other. The frigate-bird is sacred, and in some of the islands (*e.g.*, Florida) is, it would appear, the vehicle of a potent *tindalo*, or ghost of a deceased person of importance.† This *tindalo* is in Florida, under the name of *Daula*, specially invoked when canoe journeys or fishing expeditions are contemplated.

* *The Evolution of Decorative Art*, Rivington, Percival & Co., 1893, pp. 67–70.

† Codrington, *The Melanesians*, Clarendon Press, 1891, *passim*.

The frigate-bird being thus associated with the spirit of a human being, it is natural that human attributes should be assigned to it occasionally, and this we find is frequently the case. Fig. 4 shows an instance in point where the frigate-bird has been endowed with an unmistakably human arm and hand, rising from a kind of shoulder. This intimate fusion of human and frigate-bird designs is well exemplified by four canoe-prow ornaments from New Georgia which are in the Pitt Rivers Museum at Oxford, of which one is shown in Fig. 5. In these, a seated human figure is represented but with no head, in place of which is a somewhat conventionalised frigate-bird, which occupies the upper part of the carving. It is not attached directly to the human body, between which and the bird a carved bar intervenes, but instances in which the bird's head is grafted directly upon the human body, and conversely the bird's head upon the human body, are numerous. Figs. 6 and 7 show two canoe-charms from Rubiana in the British Museum. In the one the whole design is that of a frigate-bird ; in the other the bird body is almost identical, but a human head has replaced that of the bird. The head is comparable with those of Figs. 1, 2 and 3, and exhibits extreme prognathism, the facial region being drawn out into the form of an elongated snout, suggestive, no doubt, of the bird's beak ; and I think that we may safely assume that the head is intended to be half-avian, half-human. Fig. 8 is taken from a New Georgian canoe-prow ornament in which also a human head is represented upon a bird's body. Fig. 9, a fishing-net float from New Georgia, shows the converse, the frigate-bird's head is upon a human body. Figs. 10 and 11, also fishing-net floats from the same island, resemble Figs. 7 and 8 in having the human head on the bird's body, and in these the prognathism is very extreme. One of these, Fig. 10 is more conventionalised than the other and lacks the cap-like covering to the head, which in Figs. 2, 7, 8, and 11 represents the hair of the human heads.

From a comparative study of these and other specimens, I think that it is clear that the extreme prognathism which prevails so much in representations of the human form among the coastal peoples of the Solomon Islands, is due to the influence of the bird design upon them, which has had the effect of causing an unnatural projection of the facial region in correspondence with the prominent beak of the frigate bird. The constant juxtaposition of these two designs, their frequent fusion, and the mythology of the islands all lend support to this view. If I may venture to generalise from a carved human figure procured from the up-country bush people of New Georgia, brought home by Lieutenant B. T. Somerville, R.N., and now at Oxford, in which the face is severely *orthognathous*, further support would be lent to this theory, since the art of human delineation amongst the bush people would be less likely to come under the influence of designs representing frigate-birds, which would necessarily belong rather to the coastal than to the upland folk, and exemption from that disturbing influence would be anticipated.

It is interesting to note how far this traditional and unrealistic prognathous type of the human face has affected the would-be realistic art of the people. In Fig. 12 I give the upper portion of a figure of a man engraved upon a lime-gourd. The figure is evidently intended to be purely realistic, but it is clear that the delineation of the face with its snout-like projection is referable rather to the mythological, bird-influenced type, than to the normal Melanesian facial outline. A stronger case is afforded by the drawing reproduced in Fig. 13. In this instance Lieutenant B. T. Somerville invited one Raku Vinguchu, chief of Mungeri, New Georgia, to make a profile portrait of Hoto, another native. The artist carefully posed his model, and, with a pencil, equally carefully copied, as he thought, the outlines of the face. The influence of the traditional type was, however, too strong for him, and guided his hand, and the resulting portrait is a very fair imitation of the "canoe-prow-god" type with its snout-like projection. The eye, too, appears merely in the form of that of the carvings, *i.e.*, a lenticular piece of pearl-shell with a dot of wax in the centre (*cf.* Figs. 1 and 2). The beard and whiskers were, no

doubt, attributes of Hoto, and were faithfully rendered, possibly as being his most distinguishing feature.

DESCRIPTION OF THE PLATE.

Fig. 1. "Canoe-prow god," from a war-canoe, Mungeri district, New Georgia, Solomon Islands. Height, 9 inches.
„ 2. Ditto, Ngarasi district, Ramada Island, New Georgia. Height, 6½ inches.
„ 3. Carved wooden food bowl, Solomon Islands. Length, 23¾ inches.
„ 4. Figure of frigate-bird in low relief upon the blade of a paddle, Solomon Islands.
„ 5. Canoe-prow ornament, Ngarasi district, New Georgia. Height, 31⅓ inches.
„ 6 and 7. Canoe-charms, Rubiana Island.
„ 8. Canoe-prow ornament, Mungeri, New Georgia. Length, 6 inches.
„ 9. Fishing-net float, Mungeri. Height, 7 inches.
„ 10 and 11. Fishing-net floats, Mungeri. Length, 6⅞ and 8¼ inches.
„ 12. Engraving on a lime gourd, Kulambangra. Actual size.
„ 13. Drawing by Raku Vinguchu, chief of Mungeri, Eastern Lagoon, New Georgia; portrait from life of another native. Actual size.

Figs. 6 and 7 are in the British Museum; the remainder are in the Pitt Rivers Museum, and, excepting 3 and 4, were collected by Commander B. T. Somerville, R.N.

HENRY BALFOUR.

Physical Deterioration. Memorial.

Physical Deterioration. *A Memorial addressed by the Anthropological Institute to the Lord President of the Council.* **51**

The following memorial on the subject of physical deterioration was addressed to the Lord President of the Council by the Anthropological Institute. It was signed on behalf of the Institute by the President, ex-President, and Secretary, and was supported by many prominent and influential persons, including the head masters of most of the public schools.

TO THE MOST HON. THE MARQUESS OF LONDONDERRY, K.G., G.C.V.O., LORD PRESIDENT OF THE COUNCIL.

The memorial of the Anthropological Institute of Great Britain and Ireland sheweth:—

1. That the maintenance of the national physique at the highest possible standard is a matter of supreme importance to the State.

2. That the rejection of 40 to 60 per cent. of the men offering themselves for enlistment in the Army appears to indicate a serious condition of physical deterioration among the classes of the population from which these men are drawn.

3. That, since the recruits for the Army are mostly drawn from the poorer classes in towns, and since the urban population has increased from 50 to 77 per cent. of the whole within the last fifty years, it appears to be highly probable that physical deterioration is spreading every year over a larger percentage of the population.

4. That, owing to the public alarm excited by these symptoms of physical deterioration of the population, your Lordship's predecessor, the Duke of Devonshire, late Lord President of the Council, appointed a committee, the terms of reference to which were, in their final form: (*i*) To determine the steps that should be taken to furnish the Government and the nation at large with periodical data for an accurate comparative estimate of the health and physique of the people; (*ii*) to indicate generally

the causes of such physical deterioration as does exist in certain cases; and (*iii*) to point out the means by which it can be most effectually diminished.

5. That the above Committee, after hearing evidence from a large number of witnesses, issued an extremely able report, in which they recommend, with reference to the first of the above-mentioned matters referred to them, that the Government should establish: (*i*) An anthropometric survey; (*ii*) a register of sickness; and (*iii*) an advisory council.

6. That the advantages of establishing a periodical anthropometric survey, a register of sickness, and an advisory committee may be summed up as follows:—

(*a*) The measures proposed will enable the Government and the nation to know with certainty whether the physique of the population at large is improving or deteriorating, and, by comparison of the physique with the environment, to ascertain the influences which are bringing about the changes of physique.

(*b*) They will supply data to the experts and to the representatives of Government departments on the advisory committee, which would thus be enabled to arrive at important decisions on which the Government might found legislative action.

7. Without a continuous physical record of the people we cannot tell with certainty whether physical deterioration is taking place nor what is its extent, nor can we determine the conditions which influence the physical development of the population. Until these conditions are determined no remedies can be applied intelligently.

8. It is estimated that the cost of an Anthropometric Survey will not be greater than that of the Geological Survey, which is at present supported by the State, and a survey of the geology of the country, however useful, cannot be of greater value to the State than a survey of the physique of the people themselves.

9. Italy has measured about 300,000 of her conscripts, Sweden has more recently measured 45,000 of her conscripts, and Germany is at present making arrangements to measure about 1,500,000 of her conscripts, but the survey recommended by your Lordship's Committee is much more complete than anything carried out or proposed by any other country.

10. We believe that the country which is the first to promote the scientific study and culture of the national physique will thereby obtain an immense advantage in the struggle to maintain and advance its position among the nations, and that no means which might contribute to so desirable an end should be neglected by the State.

YOUR MEMORIALISTS therefore pray that you will be pleased to establish, without delay, an Anthropometric Survey, a Register of Sickness, and an Advisory Council, as specified and recommended in the Report of your Lordship's Inter-Departmental Committee on Physical Deterioration, and, if legislation is necessary, to lay the matter before Parliament.

Anthropometry. Gray.

Anthropometric Identification: A New System of Classifying the Records. *By J. Gray, B.Sc.* **52**

The chief difficulty in the anthropometric system of identification lies in the classification of the records. The method of classification must be such that when we have obtained the measurements of any individual we can tell with certainty, and with a small expenditure of time and labour, whether this individual has been previously entered in the register.

There would, of course, be no difficulty in doing this if repeated measurements of the same person by different measurers always gave exactly the same figures; but this is unfortunately not the case. If the measurers are not experts, there may be variations of 2 to 3 per cent. in values obtained for the same dimension.

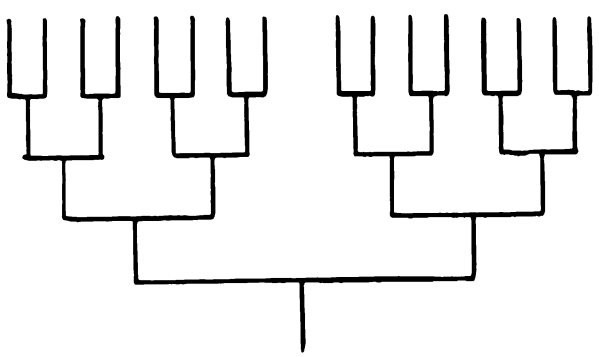
In the Bertillon system the records are classified by dividing them four times into three groups with fixed limits. For example, we may have a few thousand cards on each of which is recorded four dimensions of one individual. Let us say, to fix our ideas, that these dimensions are length of head, breadth of head, height of head, and stature. The bundle of cards is first divided into three groups by arranging them in a series according to lengths, and choosing two lengths as the limits of the middle group, which will make the number of cards in each group approximately equal. Each of these groups is again sub-divided into three groups by means of the breadths, and the subdivision is further carried out by means of the other two dimensions.

As the result we have cards finally sub-divided into eighty-one groups, each one of which contains cards lying between fixed limits of head, length, breadth and height, and of stature.

The problem to be solved by a system of anthropometric identification is :—

Given the measurements of any individual, to find whether a record of that individual is already in our register or not. If repeated measurements of the same individual always gave the same values, all that would be necessary would be to find the compartment in the Bertillon system of classification between the limits of which the four dimensions of the individual to be identified lie. But owing to the fact that measurements of the same person made by different individuals may vary by 2 or 3 per cent., when any of the four dimensions lie within that amount of the fixed limits of the compartment, it is impossible to tell in which compartment of the cabinet a previous record of the individual to be identified will be found.

The diagram will illustrate this point. For the sake of simplifying the explanation I have assumed that the record cards are sub-divided four times into two groups instead of into three. The diagram takes the form of a tree in which each stem or branch sub-divides four times into two branches.



Now let us suppose that the first dimension on a card to be allocated in the register is within 2 or 3 per cent. of the fixed limit between the two groups. It is quite possible that the card of the same individual on two successive occasions will go into different compartments.

If the second dimension also lies within the margin of uncertainty, the number of possible compartments into which the card of the same individual may pass is still greater ; and if all the four dimensions lie within the limits of uncertainty the card of the same individual may on different occasions pass into any one of the sixteen compartments of the cabinet, and the Bertillon system of classification in this extreme case would be equivalent to no classification at all.

The extreme case just mentioned will not happen often, but in many cases it will be necessary to make more than one search in order to make sure that the record of the individual to be identified is not already in the cabinet. In fact, Dr. Garson, in working the Bertillon system for Scotland Yard found that in only 61 per cent. of the cases was an identification effected by one search.

It is evident that there is no difficulty in working the Bertillon system, if the dimensions of the card to be allocated lie in the centre of the limits of a compartment beyond the margins of uncertainty.

The system of classification which I propose is to bring the card to be allocated always into the centre of the limits of a compartment. This is done by making the limits of a compartment movable instead of fixed, as in the Bertillon system.

To explain the nature of the system let us suppose that all the record cards in our register are arranged according to lengths, and that the maximum variation between two successive measurements of the same person is 4 mm. I take the head length of the individual to be tested (say 195), and form the length limits by adding on and subtracting 4 mm. The limits are thus 191 and 199. It is practically certain that the card of the tested individual will be in the bundle of cards between these two limits. This bundle is subdivided in the same way by means of the other dimensions. The final small group of cards will contain the card of the tested individual, if it is already in the register, and if it is not in the register that fact will be ascertained in every case by a single search.

In the actual carrying out of this system the labour will be greatly reduced by numbering the whole series of cards in the register and forming an index of the numbers on sheets of section paper. The numbers can thus be classified according to three dimensions simultaneously, and the number of cards in the final group may thus be reduced to a small fraction forthwith. The same process may be repeated on the final group with other dimensions if necessary.

The dimensions measured should be very slightly correlated.

But the effects of correlation as well as of inaccuracy of measurement may be almost completely counteracted by increasing the numbers of dimensions measured.

The present finger-print system in use at Scotland Yard must have a greater margin of inaccuracy in classification than measurements of dimensions, because the finger-prints are classified on the type system, and there must always be a large number of crosses between the standard types, which lie within the margin of uncertainty.

Certain cases of mistaken identification which have recently occurred appear to indicate that this uncertainty about the finger-print system is by no means a negligeable quantity.

J. GRAY.

New Guinea: Tatuing. Haddon.

Tatuing at Hula, British New Guinea. *By A. C. Haddon, Sc.D., F.R.S.* **53**

Among the members of the Motu stock of British New Guinea it is customary for the women to be richly tatued, and, usually, for the men to be less so. The two photographs were taken by my colleague, the late Anthony Wilkin, to illustrate the method of tatuing, *alo*, at Hula (or Bulaa), in the Central District. The designs to be tatued are first painted on the skin (Fig. 1) by means of a thin stick, such as the midrib of the leaflet of a coconut palm. They are then pricked in (Fig. 2) by tapping the tatuing needle with a small stick, *oa*, the knocking end of which is bound round with strips of banana leaf, *gi;* the handle of the hammer is called *kwari*. The tatuing needle, *kini*, is a small portion of a branch from which a long thorn projects. The paint is made from burnt resin, and it is mixed into paste in a small clay vessel which is

FIG. 1.

used only for this purpose; these vessels have a foot by which they are held, and in this respect are quite unlike any other vessel made by the Motuans. The first account of the tatuing practised by the Motu is that given by W. Y. Turner (*Journ. Anthr. Inst.*, VII., 1878, p. 470); a little additional information is given by W. G. Lawes (*loc. cit.*, VIII., 1879, p. 369). By far the greater part of our knowledge of the tatuing of the Motu and allied tribes is due to O. Finsch (*Mittheil. d. Anthrop. Gesells.*, Wien, XV., 1885; translated into French in *Rev. d'Ethnogr.*, V., 1886, p. 49); this admirable description is illustrated with several figures of tatued individuals. I have brought this information together in my Memoir, "The "Decorative Art of British New "Guinea" (*Cunningham Memoir*, X., *Roy. Irish Acad.*, 1894, pp. 171-178).

FIG. 2.

Finally, A. C. English gives illustrations of seventeen designs employed in the Rigo District (*Ann. Rept. B.N.G., C.A.* 35–1894, p. 69), he mentions on what parts of the body the several designs are tatued, one pattern is "tatued on either side "of the vulva, and until this design is tatued on the girl she is of no value as a wife." Several designs "are used on both sexes, and are distinctions for taking life." The following is the only other information Mr. English gives:—"The implements used in "tatuing are a very sharp thorn, a small mallet, and a paste prepared from burnt gum "and indiarubber. An old woman is generally the operator. The design is painted on "the skin and pricked in. Different designs have different significations."

A. C. HADDON.

Sinai. Thompson.

A Note on Sinaitic Antiquities. *By R. Campbell Thompson.* 54

In October 1902 I made a shooting-trip to the Sinaitic Peninsula, and, since some attention has lately been drawn to the antiquities of this region by the Egypt Exploration Fund's Expedition of 1904–1905, a few notes of what I saw may be of interest to the readers of MAN. Through the courtesy of Mr. F. E. Crow, the British Consul at Suez, I was able to start a day or two after my arrival there, with three good camels and two Arabs, and as on the way to Serbal my caravan would pass near the Egyptian temple to Hathor (near the turquoise mines) at Sarâbît el-Khadm, I intended to make an examination of its condition.

FIG. 1.—GENERAL VIEW OF THE TEMPLE, SARÂBIT EL-KHADM.

This temple was examined and drawn by the

Prussian expedition of Lepsius as far back as 1845 and was surveyed and photographed, and its inscriptions published and translated, by the British Ordnance Survey Expedition under Captains Wilson and Palmer of the Royal Engineers. Some excavations were also made by them, and among the antiquities which came from the temple were some inscriptions (royal cartouches, &c.) on blue glazed pottery, of the XIX Dynasty, which were placed in the British Museum. The work of the Surveying Expedition was published in several large folio volumes, and in these will be found a complete series of most excellent photographs of the temple and its stelæ, with a surveyor's plan of the building. Captain Wilson, who contributes an article on these ruins, considered that they were those of two temples of different dates, the earlier consisting of a rock-hewn chamber with an open vestibule in front, the later a large building connected with the first, but not in the same straight line with it.* This latter, when I saw it in 1902, contained monumental stelæ, fragments of pillars and Hathor-headed pilasters, and door-jambs of sandstone belonging to a building divided into numerous small chambers. This building is about 160 feet long and very narrow. It owes its origin to King Thothmes III, of the XVIII Dynasty, about 1550 B.C. Merenptah, of the XIX Dynasty, inscribed his name here 400 years later. The cave shrine, with the square court before it, dates to the time of the XII Dynasty. M. Bénédite, of the Louvre, who has visited Sinai of late years, has made a plan of the temple (published by Maspero, *Hist. Anc. des Peuples d'Orient*, I., 474), in which this part of the area is marked as dating to the time of the XII Dynasty, the cave-shrine being described as "construction de l'époque d'Amenemhaît III et IV."

FIG. 2.—STELE AT SARÂBIT EL-KHADM.

One of the most striking features of the temple-area is the number of monumental stelæ, which are in many cases still standing in their original positions, the largest being about 12 feet high. In the Ordnance Survey publication Dr. Birch gave a summary of their contents with the names of the people they commemorate. Those in the shrine court are for the most part much older than the rest, dating as they do to the XII Dynasty. Most of them are records left by superintendents of the mines hard by, who have thus perpetuated their names and work.

FIG. 3.—ANGLE IN THE TEMPLE, SARÂBIT EL-KHADM.

* *Ordnance Survey of the Peninsula of Sinai*, I., p. 192.

When I visited it the small chamber (the rock cave) seemed to be in much the same condition in which the Survey had left it, and the walls of the other part of the temple were in many places still standing a few feet above the ground level. It had evidently been a little provincial Egyptian shrine, built for the needs of the few Egyptian soldiers and mine-officials stationed here, who may have provided their own labour to build it, and this would account for the comparative poverty of the result.

FIG. 4.—STELÆ AND PILLARS IN THE TEMPLE, SARÂBIT EL-KHADM.

I see in a letter to the *Times* of May 23rd, 1905, that Professor Petrie, who was employed by the Egypt Exploration Fund to excavate here, claims that "we have here the only "Semitic temple preserved "to us." But I do not see that the few arguments which he brings forward in his letter give the least proof that the temple was not of Egyptian type. When he contends that the pillars and stelæ are "Bethel" stones, set up by pilgrims of presumably Semitic origin, it seems to me that he has little grounds for such a theory, and the fact that he quotes some of them as having inscriptions of the XII Dynasty (naturally in Egyptian) would seem to show that they are of Egyptian, not of Semitic origin. In so far as he is referring to the numerous stelæ, inscribed and uninscribed, which I have already mentioned, there can be no reasonable doubt that these are not "Bethels" set up by "Semitic pilgrims," whoever they may have been, but are ordinary Egyptian monumental tablets of Egyptian type, and, when inscribed at all, with Egyptian inscriptions. There is certainly nothing non-Egyptian about all this. It may be noted that none of the inscriptions seem to refer to dreams or pilgrimages, as might have been expected if Professor Petrie's theory were correct. Further, Professor Petrie not only claims that this temple is Semitic, but also that it is the "only "Semitic temple preserved "to us." To archæologists who are more familiar with Semitic antiquities this statement will appear somewhat rash. May I remind Professor Petrie of the existence of the temple at Abu Habba (Sippara), the Temples of Bel, Ninib, and Nin-makh at Babylon lately excavated by Koldewey, the Temple at Nippur excavated by the American Expedition, and the Temple at Khorzabad, none of which are later than the eighth century B.C. and

FIG. 5.—CARAVAN COMING UP WADI SOWÂB, NEAR SARÂBIT EL-KHADM.

some of them far older than the little provincial temple at Sarâbit el-Khadm. Incidentally, I may mention also that during the second period of the British Museum excavations of 1903–1905 at Kouyunjik, which were carried on for eighteen months by Mr. L. W. King, I found a temple to the god Nabu, which dates at least as far back as the ninth century B.C.

Professor Petrie also notes in his letter the discovery of a large bed of white ashes, in places a foot and a half deep, beneath the long building of Thothmes III, and although no bones occur in it, yet he claims it as the remains of burnt offerings, noting that no such deposits are known in Egyptian temples. But it may be pointed out that it is much more probable that these ashes are the remains of the fires of the XII Dynasty copper smelters, who have left their mounds of slag lying round the site. As Lepsius remarked in 1845 with reference to the slag heaps, "this free point was chosen only for "smelting on account of the sharp and, as the Arabs assure us, almost incessant draught "of air."*

I may add one or two instances of Sinaitic folklore which I noticed during the journey. From Sarâbit my caravan took the route round to Wadi Maghâra, where are ancient turquoise mines, which an English company was still working at the time of my visit, and thence southwards to the ibex-district round Jebel Serbal. It was while I was hunting in this neighbourhood that my Arab, Sellemi, showed me an instance of "fire-jumping." One morning, after we had had no luck for three or four days, he expressed a wish to accompany my stalker and myself. As we left camp he stopped for a moment, pulled a box of matches out of his burnous and set fire to one of the little thorn bushes which were very plentiful round about. Then, as it blazed, he took a run and cleared it, my stalker also following in his steps; and, in answer to a question from me, they said it would bring luck, or, at any rate, if we did not see game to-day we might to-morrow.

FIG. 6.—TURQUOISE MINES AND SETTLEMENT OF WADI MAGHÂRA.

Sellemi also enlarged on the *ghouls*, *afrits* and *jinn*, which, as he explained, had been gradually driven back to their homes in the Soudan by the introduction of swords, guns, and such like. He had an infallible test for knowing whether such black men (which is one of the forms a demon may adopt) as he might pass in the street were devils or not, for, as he said, "If the negro is an *afrit* and no man, my hair always "stands up on end of its own accord, and thereby I know."

It may also be worth noting that a plant used by ancient Assyrian physicians, which they themselves knew to have existed in Sinai, is still to be found in the northern part of the peninsula. The peculiar *Hyoscyamus muticus*, with its coarse leaves and long foxglove-like fronds with dark purple bells, was most noticeable, and the natives are well aware of its intoxicating properties, which Sellemi explained to me. Now in one of the Assyrian medical tablets in the British Museum there is an incantation containing a long

* Lepsius, *Letters from Egypt*, p. 348.

description of the "heart-plant," which was first found in the district called Makan, long since identified with the Sinaitic Peninsula. It runs thus :—

"[Incantation]:—. . . The heart-plant sprang out of Makan, and the Moon-god [rooted it out and planted it in the mountains]. The Sun-god brought the plant down from the mountains [and planted it] in the earth; its roots filled the earth (and) its 'horns' stretched out to heaven. [It seized on the heart of the Sun-god] . . ., it seized on the heart of the Moon-god in the clouds, it seized on the heart of the bull in the fold, [it seized on the heart of the goat] in the pen, it seized on the heart of the ass in the stall, [it seized on the heart] of the dog in the kennel, it seized on the heart of the pig in the stye [it seized on the heart] of the man in his pleasaunce (?), it seized on the heart of the maid in her chamber (?). [It hath seized on the heart of so-and-so] the son of so-and-so . . ."*

The locality Sinai, together with the description of its "horns" (*i.e.*, spike) and its power to "seize on the heart" (*i.e.*, "mind") of mankind, quite justify the comparison of the two.

R. CAMPBELL THOMPSON.

REVIEWS.

Egypt: Craniology. **Thomson: MacIver.**

The Ancient Races of the Thebaïd, being an Anthropometrical Study of the Inhabitants of Upper Egypt from the Earliest Prehistoric Times to the Mohammedan Conquest, based upon the Examination of over 1,500 ***Crania.*** By Arthur Thomson, M.A. (Oxon.), M.B. (Edin.), Professor of Human Anatomy in the University of Oxford, and D. Randall-MacIver, M.A., Laycock Student of Egyptology at Worcester College, Oxford. Oxford, 1905. Pp. 142. 30 tables. Inset, containing absolute measurements. 15 plates. 2 charts. 33 × 26 cm. Price £2 2*s*. **55**

Given over 1,500 crania of the ancient inhabitants of Upper Egypt, which, on archæological evidence, can be assigned to eleven different periods, stretching backwards from the time of the Roman occupation of Egypt to a primitive predynastic age—a total period of perhaps 7,000 or 8,000 years—what can be ascertained of the race or races to which these crania belonged? Craniology, when importuned, is apt to be oracular in its replies, but the answer obtained by the authors of this elaborate and exhaustive monograph is unhesitating and decided and capable of brief statement. There were two races in ancient Egypt, a negroid and a non-negroid, living side by side, buried side by side, sometimes one prevailing, sometimes the other, but, as far as can be now told, of equal caste. At the point at which this craniological history opens the same two races are found; at its conclusion—the period of Roman occupation—they are still extant, intermarriage evidently affecting them but to a slight extent. Only for a passing period, during the later dynasties, do they appear to fuse. One recalls the condition of the negroes in the United States and of the Jews in Europe, but clearly neither of these constitutes a parallel case to the picture of life in ancient Upper Egypt, drawn by the authors of this monograph. Such a revolutionary conception needs a foundation on irrefutable fact and inference.

Before proceeding, however, to discuss the evidence on which this daring theory is founded, it is necessary to recapitulate briefly the conclusions reached in three papers which have been published recently dealing with the ancient Egyptians. In the Journal of the Anthropological Institute for 1900, Mr. MacIver, one of the authors of this monograph, gave a summary of Recent Anthropological Work in Egypt. He then regarded the predynastic Egyptians as Libyans, a race that finds to-day its nearest representative in the Kabyles of Algiers; an invasion of the men of Punt, he believed, took place before the fourth dynasty, with the result that the noses of the inhabitants of Egypt became narrower and their heads broader. A second invasion (probably of the

* Küchler, *Beiträge zur Kenntnis der Assyrisch-Babylonischen Medizin*, p. 9.

Hyksos) occurred between the twelfth and eighteenth dynasties, resulting in a diminution of the breadth of nose and head of the ancient Egyptian. In the following year Professor Flinders Petrie contributed to the same Journal a paper on the Races of Early Egypt. From the protraiture of the ancient race he concluded that there were at least six well-marked types amongst them and tacitly assumed that their existence indicated a mixture of at least six races in the people who inhabited ancient Egypt. The original race in his opinion was one which was closely related to the Amorites of history and Kabyles of to-day.

The two papers just mentioned were tentative efforts, but the "Study of the Naqada Crania" by Miss Cicely D. Fawcett (*Biometrika*, Vol. I., 1901–1902) is of a permanent nature; as long as craniology consists in the accurate and scientific application of empirical craniometrical measurements, Miss Fawcett's paper must remain a classical memoir. From a comparison of the crania of the prehistoric Egyptians of Naqada with those of Theban mummies, of modern inhabitants of Cairo, of Europeans, and of Negroes, she concluded that the people of ancient Egypt were a homogeneous race, and that they remained unmixed for 7,000 or 8,000 years.

During that long period the Egyptian head became higher and broader, the face less prognathous or prominent. A strict application of mathematical methods found no adulteration or mixture of the race. Thus from four separate studies of heads, made within the last five years, four different theories have arisen: (1) that there are at least three races mingled in the inhabitants of ancient Egypt; (2) that there are six; (3) that there is but one; (4) the theory maintained by the authors of the monograph under review, that there were two, but that they lived side by side until early in the Christian era. Surely, then, one may say that craniology is a sphinx, when on each of four occasions she returns a different and contradictory answer. One may well ask, Will she ever speak the truth?

Craniology, like civilisation, becomes complicated as it progresses. Until now the equipment of a craniologist was of the simplest kind; with the knowledge of a dozen fixed points on the skull and a tape measure, the whole field was open to him. The anatomist possessed little advantage. No one will admit our ignorance of the laws which regulate the growth and moulding of the skull more readily than Professor Arthur Thomson; no one has made a more earnest endeavour to acquire an insight into those laws. In the paper by Miss Fawcett is seen the dawn of a period of collaboration. Mathematics are in the ascendant. Professors Pearson, Thane, and Flinders Petrie are associated in the work as experts in their several subjects. In the present monograph the anatomist is senior partner; the archæological aspect is ably handled by Mr. MacIver; Mr. Frank Parker serves as mathematical expert. Here the mathematical formulæ are toned down; as far as possible the results of measurements are cast in the form of diagrams—a form which veils the actual fact less obscurely than a mathematical expression.

The means which enabled the authors of this monograph to separate the crania of the negroid from those of the non-negroid inhabitants of ancient Egypt are of the simplest character. The criteria by which the negroid crania were distinguished are two in number. They are founded on the relative width of the nasal aperture, and the relative length of the upper face. Crania in which the length of the face, measured from the nasion to the alveolar point, was 54 per cent. of the greatest breadth of the face (bizygomatic diameter), or less than 54 per cent., were regarded as assuredly negroid, if at the same time the nasal width was 51 per cent. or more than 51 per cent. of the height of the nasal cavity. Even if the nasal width were only 50 per cent. of the height, such a skull was admitted to the negroid group if the facial height was low. That is to say, all the skulls with short, wide faces and nasal apertures were regarded as those of negroes.

Now the relatively wide nose and wide face are certainly features of negroid crania —they are negroid characters—but are they sufficient alone to serve as distinctive marks? In my opinion they are totally insufficient. Of seventy-three skulls obtained from the plague pits in Whitechapel there are nine which fall easily within the negroid group, and, on this classification, their owners were negroes and not Englishmen (*see* Macdonell, *Biometrika*, Vol. III., 1904). A study of Shrubsall's measurements of the skulls of various negroid races will show that, on the Oxford standard, nearly 30 per cent. of the skulls belonged to a non-negroid race. Further, a preliminary examination of the Polish Jews in Whitechapel convinced me that a more extensive investigation would show that at least 30 per cent. of them possessed the negroid proportions of face and nose, thus agreeing approximately with the inhabitants of ancient Egypt.

If craniology fails to distinguish between negroid and non-negroid crania, how can it be expected to distinguish between races that are less strongly contrasted than these? What are the marks by which the negro's skull can be recognised? There is no single feature that suffices, but the recognition of a combination of certain features will enable one to pick out from a miscellaneous collection of skulls nearly 90 per cent. of the negro skulls present. Chief amongst these features are (1) the degree to which the ascending nasal process of the superior maxilla projects in front of the inner third of the lower margin of the orbit; (2) the configuration of the nasal aperture; (3) the size of teeth and development of the alveolar process of the upper jaw; add to these the relatively wide nose, wide face, and narrow head.

I applied the first and second criteria to the skulls of ancient Egyptians in the museum of the Royal College of Surgeons to see if those which are assigned by the Oxford standard to the negroid group also possessed these two features. The measure in which the most prominent point on the anterior border of the ascending nasal process projects in front of the orbital margin expresses the flatness or prominence of the nose. The measure is low in negroes and high in Europeans. The measurements were taken with a compass-shaped instrument placed astride the nasal aperture, its two legs being applied near the lower margin of the orbit. The results of this enquiry are shown in Table I.:—

TABLE I.—THE PROJECTION OF THE ASCENDING NASAL PROCESS OF THE SUPERIOR MAXILLA.

Millimetres -	4	5	6	7	8	9	10	11	12	13	14	15	16	Mean.
50 negro skulls (males) -	—	3	7	10	8	8	4	6	2	2	—	—	—	8·38
38 non-negroid, ancient Egyptians (males).	—	—	1	1	1	7	2	15	4	3	2	0	2	10·94
20 negroid, ancient Egyptians (males).	—	—	—	—	2	4	7	3	3	1	—	—	—	10·2
36 negro kulls (females) -	2	6	5	5	8	5	4	0	1	—	—	—	—	7·72
28 non-negroid, ancient Egyptians (females).	—	—	—	2	3	6	6	8	0	1	—	—	—	9·96
17 negroid, ancient Egyptians (females).	—	1	—	—	4	—	8	1	2	1	—	—	—	9·94

From Table I. it will be seen that, on the application of the nasal-projection test, those skulls assigned to the negroid group by the Oxford standard do possess a slightly flatter nose than the non-negroid, but do not approach that degree of flatness found in pure negroes.

Professor Macalister was the first to discriminate the various racial types of pyriform or nasal aperture (*Journ. of Anat. and Physiology*, Vol. XXXII., 1898, p. 273).

In typical negro skulls the sharp lateral margins of the pyriform aperture end below near the prominences caused by the fangs of the two canine teeth, named here Type 3, In European skulls and those of civilized races the sharp lateral margins of the pyriform aperture turn inwards and become continuous with the margins of the nasal spine recognised here as Type 1. An intermediate condition frequently occurs in which the lateral margin turns inwards, but fails to meet the margins of the nasal spine—termed here Type 2. Table II. shows the application of this criterion to the Egyptian and other African skulls found in the museum of the Royal College of Surgeons.

TABLE II.—THE TYPES OF PYRIFORM APERTURE.

——	Type 1.	Type 2.	Type 3.	Mean of Type.
49 negro skulls (males) - - - -	8	26	15	2·1
37 non-negroid, ancient Egyptian (males) -	22	12	3	1·48
20 negroid, ancient Egyptian (males) - -	10	9	1	1·5
33 negro skulls (females) - - -	3	14	6	2·39
28 non-negroid, ancient Egyptian (females) ·	18	10	0	1·35
17 negroid, ancient Egyptian - -	9	7	1	1·53

Here, again, the "negroid" Egyptians show a slightly greater approach to the negro type than the non-negroid Egyptians, yet the difference between the real negro and the Egyptian negroid is amply sufficient to show that they do not belong to the same class.

The facial and nasal indices used by Professor Thomson and Mr MacIver to distinguish the negroids from the non-negroids are relative terms; these two races were found to have the same cephalic index, but yet were regarded as two and distinct races. Is it not also possible, then, that they may have different facial indices and yet be the same race? To test this assumption I tabulated the absolute measurements of the width of the face, of the width of the nose, of the length of the upper face, and of the height of the nose of over fifty males of each of the following groups:—Negroes (from Shrubsall's tables) of Egyptian negroids, and of Egyptian non-negroids (both from the tables supplied by Thomson and MacIver), and of Whitechapel skulls (from Macdonell's tables). The results are instructive (*see* Table III.):—

TABLE III.—MEAN MEASUREMENTS OF (1) NASAL HEIGHT, (2) THE NASAL WIDTH, (3) UPPER FACE HEIGHT, (4) BIZYGOMATIC DIAMETER OF OVER 50 SKULLS OF EACH RACE.

——	Nasal Height.	Nasal Width.	Upper Face Height.	Bizygomatic Diameter.
Negroes - - -	47·78	27·28	69·8	129·6
Egyptian negroids - - -	48·38	26·71	65·7	126·7
Egyptian non-negroids - -	52·21	24·28	72·5	126·
Whitechapel - - - -	51·01	24·30	69·8	128·8

When these statistics are examined it is seen that in absolute width and height the nasal aperture of the negroid Egyptians approach the true negroes much more nearly than they do the non-negroid Egyptians; that is, the negroid Egyptians do really possess nasal

measurements which closely approach those of the negro, but when the facial measurements are examined the case is the reverse. As far as the absolute facial height is concerned the Egyptian negroid is more a negro than the real negro, while in absolute breadth of face he is a true non-negroid Egyptian and not any longer a negro; he is only a negro, if one expresses the breadth of the face in such highly deceptive terms as are grouped under the name of indices. Here again, then, in the absolute proportion of the face the negroid Egyptian is not a negro.

There are other points which go to show that the group classed as negroid in the monograph under review cannot be classed with the African negro. There is, for instance, the sexual difference in skull capacity. The average difference between the cranial capacity of the male and female negro is relatively very large. Shrubsall found it to be 220 c.c.: Broca, 186 c.c. The corresponding difference in the negroid group of ancient Egyptians is 92·5 c.c.; in the non-negroid 167·5 c.c. In this feature the non-negroid group is the more negroid.

Thus the criteria relied on by Professor Thomson and Mr. MacIver to distinguish a negroid from a non-negroid race, break down when submitted to analysis, and the theory of a dual race in ancient Egypt becomes untenable, yet there are facts which can be best explained on the theory of a certain infusion of negro-blood in the race. Such an infusion is highly probable on historical evidence. In certain groups of portraiture Professor Flinders Petrie has recognised negroid characters. In Miss Fawcett's elaborate monograph the possibility of a negroid infusion is considered but dismissed on account of the conformity of the curves of frequency with the curves of probability given by the cephalic indices. Yet if a Semitic race, with a cephalic index of 73 were to mix with a negro race possessing an approximately similar index—as in this case is probable—a mathematical investigation might easily fail to detect it. Dr. Warren found that the proportion of the limbs in ancient Egyptians corresponded with that of negroes. When the characters of the nose are examined they certainly are seen to possess points in common with negro-crania. Further, a detailed examination of Egyptian skulls will bring to light many structural features which may fairly be termed negroid.

One strange result of the statistical investigation of skulls I cannot resist setting down here. While Professor Pearson declares that a double-peaked frequency curve does not necessarily indicate a mixture of races, Professor Thomson and Mr. MacIver maintain that a single-peaked frequency curve may not mean that the race is pure or homogeneous. The cephalic indices of the ancient Egyptians give a single-peaked curve of frequency; the upper facial index gives a double-peaked curve. Because of the one Miss Fawcett and Professor Pearson regard the Ancient Egyptians as a single race; because of the other Professor Thomson and Mr. MacIver maintain they were a dual race. We must wait longer for further enlightenment on the interpretation of curves of frequency, and for the discovery of a human race which is admittedly pure, and for another which is admittedly mixed.

It is pleasant to pass from the points in which the authors of the Thebaid and Naqada monographs are at absolute variance to those in which they agree. Both agree in these two points that in the process of time the heads of the ancient Egyptians became relatively broader and higher, and their faces less projecting or prognathous. Both agree, too, in regarding the change as the result, not of racial mixture, but of the action of that environment which is entailed by civilization. If one could positively exclude racial admixture as a factor these results would, indeed, repay the labours which have been spent on these great monographical monuments of industry. For, whatever may happen in the course of time to the destructive and constructive contributions Professor Thomson makes here to the methods of craniology, or to Mr. MacIver's lucid account of Egyptian Archæology, or to Mr. Parker's mathematical methods, it is

certain that the tables and charts of this monograph must be a permanent source of craniological fact. It is improbable that ever again over 1,500 crania will be exhumed from a narrow area which, on circumstantial evidence, can be assigned to a period stretching over 7,000 years. A. KEITH.

Religion. **Oldham.**

The Sun and the Serpent; a Contribution to the History of Serpent-Worship. By C. F. Oldham, Brigade Surgeon, H.M. Indian Army, Member of the Royal Asiatic Society, &c. London: Constable & Co., 1905. 22 × 14 cm. Price 10*s.* 6*d.* **56**

The appearance of a new treatise on the worship of the Serpent causes some natural apprehension. "Serpent worship," says Professor Tylor, "unfortunately fell "some years ago into the hands of speculative writers, who mixed it up with occult "philosophies, Druidical mysteries, and that portentous nonsense called the Arkite "symbolism, till now sober students hear the very name of ophiolatry with a shiver." There is, it is true, none of this rubbish in the present work, and the author steers clear of what Max Müller in his last great book calls "that laziest of all expedients, that "of ascribing all that seems barbarous in Indian religion to the influence of the "aboriginal inhabitants of the country of whom we know nothing." This was the Oxford scholar's pleasant way of expressing his contempt for all that was not Sanskrit literature; but it illustrates the danger of attempting, as Dr. Oldham does, to confine serpent-worship to any one of Indian races. On the contrary, it seems much more probable that any people who came into contact with a creature like the cobra would be sure to worship it.

The main purpose of the book is to ascertain the origin of the people known as Nâgas in early Hindu literature. These are a people in the mythological cloud-land, whose legends may have been founded on some substratum of fact, but what this kernel of history may be is most uncertain. In the author's view they and the Asuras are hostile tribes who opposed the Aryan invaders, and the heavenly Nâgas, or demi-gods, are the deified ancestors of the Nâga people on earth. He has, I think, failed to establish this thesis, simply because the notices of the Nâgas in early literature are so vague that it is impossible to say how much is folklore and how much history. It is useful to have these passages collected; but they are arranged without any semblance of order, and though there is a classified table of contents, the book is destitute of an index.

The best part of the book is that based not on literary speculation, but on the writer's own observations. He is well acquainted with the country along the Himâlaya. He examined many of the shrines, and the book is well equipped with excellent illustrations of them. We know, of course, from the diaries of the Buddhist pilgrims and later observers that this region was a centre of serpent-worship. But when Dr. Oldham attempts to investigate the very tangled ethnology of these people, we find him but slenderly equipped for the task. He seems to have little acquaintance with the recent literature of the subject, and even Mr. Risley's great report on the last census is not quoted.

But when he gets rid of speculations on ethnology and totemism his account of what he has himself observed is interesting and useful. Thus, he brings out that here the snake cult is not phallic, and he gives a good account of the inspired prophet of the snake shrines, who works himself up into a state of ecstacy by whipping himself with a terrible scourge and inhaling the smoke of the sacred cedar tree. If he had described this curious worship and these quaint shrines in greater detail we could well spare the historical and ethnological disquisitions which occupy the greater part of the book.

W. CROOKE.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

STEATITE CARVING FROM MENDILAND, IN THE BRITISH MUSEUM.

ORIGINAL ARTICLES.

Africa, West. With Plate G. Joyce.

Steatite Figures from West Africa in the British Museum.

By T. A. Joyce, M.A.

57

In the *Internationales Archiv für Ethnographie*, Vol. XIV, p. 195, Dr. L. Rütimeyer published a long paper dealing with the curious soapstone carvings found in Sierra Leone. In this, the first systematic treatise dealing with these interesting relics of a forgotten craft, the author brings forward the following facts concerning them. They seem to be peculiar to a comparatively small area, between the Boom and Kittam rivers; they make their first appearance at a distance of about 20 kilometres from the coast, but are found in their greatest numbers from 30 to 40 kilometres further inland. The natives, knowing nothing of their manufacture, explain their existence somewhat naïvely by attributing to them a supernatural origin. For this reason they are considered to be of great value, and natives who are lucky enough to find them keep their existence as secret as possible.

The localities in which they are found may be divided into two classes, primary and secondary. The first are certain tumuli in the interior, where they are said to be discovered in considerable numbers, up to fifty or so; the existence of these tumuli, it should be noted, is only known from the reports of natives. The secondary localities are disused native fields, where single figures are occasionally obtained by digging. The explanation of the presence of these images in the latter localities is found in the fact that the natives employ them as agricultural charms.* After a description of their chief characteristics, which include, in the case of the greater number, a vertical hole in the top of the head occasionally communicating with the eyes and ears, the author proceeds at length to discuss their origin, drawing comparisons with carvings from many other parts of Africa.

He calls attention to the extreme rarity of stone carvings in this continent outside the sphere of ancient Egyptian civilisation, and mentions the soapstone carvings of Zimbabwe as the only parallel, pointing out that a foreign influence has been more than suspected by many leading archæologists in the art of the latter locality. He cites the art of Benin as an instance of the proficiency to which the negro can attain under the guidance of external culture, and finally, after frequent reference to a paper by Delafosse,† in which the latter tries to establish the presence of Egyptian culture on the west coast, arrives at the following conclusion: that, at a period more or less remote from the present, a negro race, indigenous or immigrant, produced these sculptures under the influence of an inspiration issuing from Egypt.

The rest of the paper is occupied by a description of the figures of this class in the various continental museums, most of which are reproduced in a series of excellent plates.

The object of the present note is to supplement Rütimeyer's paper by describing a series of these carvings in the British Museum, and to record a little additional information which I have been able to collect through the kindness of various correspondents. Most of this information is in corroboration of Rütimeyer's facts, but, as will appear later, I do not arrive at the same conclusion as to the ultimate origin of these interesting figures.

At the time when Rütimeyer's communication appeared in print there were only three specimens of soapstone carving from Mendiland in the British Museum, and none of these were remarkable for size or perfection (Fig. 1 *b*, *c*, *d*); but recently two

* In this case it is possible that figures have been found in fields where tumuli containing them have been levelled in cultivation.

† *L'Anthropologie*, 1900, Nos. 4-6.

additional specimens have been acquired, one of which is not only an unusually well-finished example, but in design, as far as I am aware, unique. It is figured on Plate G, and represents a figure 13 inches long reclining at full length on its back on an oblong plinth, 14·2 by 4·6 inches. The legs, which are inferior in modelling to the rest of the figure, are crossed above the knee. The eyes are open and highly protuberant; the nose, exceedingly platyrhine, is considerably damaged; the chin projects sharply, in fact, it seems possible that the artist intended to represent it as furnished with a short beard. The lobes of the ears are pierced. On the head is a closely fitting cap; on forehead, temples, and upper arms are carved zigzags in partial relief representing tattoo marks; lines in relief from the corners of the mouth to the ears probably have a similar signification; bands of lines, also in relief, running from the shoulders across the collar bones, and combining to form a plait pattern down chest and abdomen, may represent either tattoo marks or a necklace. On the left arm is a large armlet with a fetish or amulet: the right wrist bears two bracelets; the left, one. The right hand is closed, but hollowed out as if some object were originally inserted in its grasp. The general workmanship is good, the form of the body well moulded,

c *b* *a* *d*

FIG. 1.—STEATITE CARVINGS FROM SHERBRO AND MENDILAND (BRITISH MUSEUM).

and the position easy and natural. It was collected in Mendiland by Mr. G. Garett, late Travelling Commissioner.

Fig. 1 *a* is the head and shoulders of a figure of which the lower portion from the arms downwards has disappeared. It has the same goggle eyes and highly platyrhine nose as the first, but is altogether of coarser workmanship. Across the head from ear to ear runs a fillet, to the ends of which cords are attached; these cords are grasped by the hands, which are brought close under the chin. In the centre of the crown, just in front of the fillet, is a vertical hole, a common feature in these figures. A similar hole is found on each shoulder. A ridge running from the hole on the head to the root of the nose may represent tattooing. This figure was obtained from Mr. F. J. Alldridge.

Fig. 1 *b* represents a squatting figure 7·6 inches high, exceedingly roughly carved; so rude is the workmanship that it may possibly be a modern imitation. The surface shows no signs of age or weathering.

Fig. 1 *c* is the head of another figure 4 inches long; like Fig. 1 *a* it has a band running over the head from ear to ear, and the nostrils are extremely broad. This and the preceding were obtained on Sherbro Island by Captain C. W. Soden.

Fig. 1 *d* is a small figure in a squatting attitude, 4·9 inches high, elbows on knees and hands supporting chin. One arm, one leg, both feet, and half the body are missing. The face is well carved, with plenty of expression; the nose is again very platyrhine. An interesting peculiarity in connection with this figure is that at some time, perhaps when it was broken, an iron ring has been fastened round the body immediately under the arms. A portion of this ring, much oxydised, still remains. There is a large vertical hole in the crown of the head, at the bottom of which is a lump of iron oxide. This figure was dug up at Bendu on Sherbro in 1883, and has been in the Museum collection since 1886.

I am able, by the kindness of Mr. and Mrs. May, to figure a specimen in their possession, which, like the British Museum figure, I believe to be unique in design (Fig. 2). It represents a seated native, once more with exceedingly broad nostrils and a hole in the top of the head, leaning against a three-legged back-rest. This form of support is still in local use; the leg in rear is pierced with a traverse hole near the top. The carving was acquired in Mendiland.

FIG. 2.

In addition to these specimens, I have recently heard of several private collections of steatite carvings from this neighbourhood, and it is evident that such figures are by no means as rare as was at first thought.

As regards the position held by these figures in the estimation of natives of the present day, I will first quote Mr. W. J. Bruce, of the Railway Survey of Sierra Leone, who was kind enough to give me some notes on the subject headed "Steatite "carvings preserved by the Mendi as part of their worship, and called *Nomorí* (*Nomoli*)." He continues, "I was shown three of these images in the Tiama district in 1902, but was "unable to obtain much information about them as my enquiries aroused suspicion. I "was informed by Mendi and Timni alike that they were of supernatural origin ('God "made them') and that no one in their country could make anything like them; that "they were dug up, one man adding that he knew 'a hill' where 'plenty' had been "found, but declining to locate it; that they were treasured by the families who owned "them; and that they made farms fertile. A negro schoolmaster described the ritual "he had seen followed when a *nomori* set up in a newly-sown farm. The image was "placed on a pedestal of earth, usually an old ant-hill, in the field, and the farmer and "his household walk round it chanting an appeal for a good crop, each in turn striking "it with a whip. My informant could give no explanation of this. I have seen the "empty places covered with a small thatch, and heard these images called 'farm devils.' "I have been told that the Mendi are the only race which possess them."

An important piece of additional information was kindly given me by Miss Fairbrother, and consists in an extract from a letter from Mr. G. Hart to his sister. The writer speaks of the figures as "found only in this [Bandajuma] and the Panguma "districts, and in the bordering parts of Liberia. The people find these on the farms "when digging and 'boushing' them. They look on them in something the same way "that the Gold Coast people look on the *aggri* beads, but they have no value for them. "They say 'devil make them,' and they put them in the shelters in the rice-fields, partly "as protection, and partly in their capacity of 'rice-master.' For they believe that, if "severely flogged, at night these stone images will go out and steal plenty of rice from "other farms and plant it in that of their owner.* But here's the quaint part about "it. The tribes here now, who find these things, never by any chance work in stone. "They make rough wood figures of an entirely different kind for certain ceremonies "connected with the secret societies, but never anything else."

* This, perhaps, explains the ceremony described to Mr. Bruce.

From the same source and by the same channel the following interesting note regarding the cult of these images in Liberia has just reached me: "I'm collecting "*nomoris* here. . . . Apparently the Kissi worship them, because each one I've "found, or been brought, has been spattered over with blood (chicken's) and egg. But "none I've yet seen here is as good as those obtained in the Panguma district."

With regard to the original makers of these images and the artistic influences which attended upon their manufacture, I should like to say a word rather in deprecation of the tendency shown by some to explain relics of pre-existing artistic and technical activity in savage Africa by a reference to Egypt or the external world. In certain cases, the bronze-casting of Benin for instance, there is no doubt that such a reference is just; but with regard to these soapstone figures, not only does no trace of such external influence appear, but there is no reason why it should be invoked.

In the first place the argument from the rarity of stone carving in savage Africa loses its force when it is remembered that steatite is far easier to work than wood, it has no grain, and is softer, a mere scratch with the thumbnail being sufficient to make a considerable impression. In fact, from this point of view, these figures strictly do not belong at all to the same category as carvings in stone. Nor is there any necessity to regard them in consequence as relics of the far-away Stone Age of Africa; the fact that the present inhabitants know nothing of them is of little moment. In a country which has little or no history the word "prehistoric" bears little significance. In this quarter of Africa, as in many other parts of the continent, tribal migrations and wars of extermination have effectually blotted out the past, and it is perfectly conceivable, in such an environment, that the manufacture of these figures disappeared with the tribe which made them.

In the second place the figures themselves display attributes which are associated closely with the negro; their facial traits, especially the extreme breadth of nose, are manifestly negroid; the chair shown in Mr. May's specimen is of a type still locally common and has nothing foreign about it, the tattooing and the amuletic bracelet shown in the specimen on Plate G, are equally "negroid"; in fact, no figure which I have yet seen actually or in photograph shows the least hint of any connection with Egyptian or foreign art. Had there been such it is impossible not to believe that some trace would have survived, in the same way that the figures of Europeans are introduced into the art of Benin, or Chinese and Japanese designs appear on European porcelain.

With regard to the evidence of Egyptian culture on the west coast laboriously collected and ably put forward by M. Delafosse; the points of resemblance found in certain institutions, &c., apply equally well to other races scattered all over the globe. And in regard to this point another word might be said. It is too often forgotten that, while a great deal of the Egyptian civilisation may have been exotic, yet it must have contained a large substratum of what was native African. Or, at least, indigenous culture must have played a considerable part in modifying and contributing to the imported civilisation. Many small points of correspondence between civilised Egypt and savage Africa may be explained by this very natural assumption of a common ethnographical element, indigenous in character. Professor Thomson and Mr. Randall MacIver in their recent monumental work on the *Native Races of the Thebaïd*, have shown that a negroid type was present in the population from the earliest time downward.

From the evidence to hand, therefore, there seems no reason to doubt that the figures under discussion are not only of native manufacture but the products of a local and indigenous art. The final solution of the question may perhaps appear when the tumuli mentioned in the native reports are located and explored. But at present the very existence of these cannot be regarded as proven. T. A. JOYCE.

Egypt: Craniology. Thomson.

Note on Dr. A. Keith's Review of "The Ancient Races of the Thebaid" ("Man," 1905, 55). *By Professor Arthur Thomson, M.A., M.B.* 58

Dr. Arthur Keith, in a recent review of our monograph on the Ancient Races of the Thebaid (MAN, 1905, No. 55), commits himself to certain statements which I think require qualification. In dealing with the application of our criteria, viz., the nasal and facial indices, he says (p. 92): "All the skulls with short, wide faces and nasal apertures were regarded as those of negroes." Now in respect to this matter we were particularly guarded; what we did say was as follows (p. 86, *Ancient Races of the Thebaid*): "There seems little reason to doubt that the features of Group I. betray a "negroid influence. In every character, of which we have a measure, they conform "accurately to the negro type; and in many respects, as may be seen from the photo-"graphs, they exhibit appearances which, judged by the eye, certainly lend very strong "additional support to this view. Amongst such we may note, in the specimens which "we have at our disposal, the modelling of the forehead, the interocular width, and that "peculiar form of nasal aperture described by the French as "*Gouttière simienne*." "The excavators at El Amrah noted on several occasions that the hair which adhered "to the scalp was curly as distinguished from other hair of a straight or wavy kind "which also occurred in the graves."

In reference to the above it is obvious that in our generalisations we were limited to the consideration of those features of which we had a measure, viz., the nose and face. In regard to these criteria, let me again quote Dr. Keith. He says: "Now the relatively "wide nose and wide face are certainly features of negroid crania—they are negroid "characters." Well and good, but he goes on to disprove the value of these criteria by stating that certain other races (presumably pure ?) which he examined contained certain percentages of negroid and non-negroid skulls according to our standard. Let me quote what we said regarding this matter: "In the facial index the point of cleavage was 54 "and in the nasal at 50-51, and *though there is necessarily a slight artificiality in making* "*the division so rigid*, we considered it quite legitimate to fix the limits of our two "groups by these figures." The words in *italics* were introduced because we realised that it was impossible for us accurately to determine the range of variation of either group; for convenience of working we adopted an arbitrary line of cleavage, and our subsequent results, I think, amply justified our procedure.

In the combined males and females of the *negroid* group the "*medians*" of the different series are, without exception, platyrhine, whilst the "*medians*" of the combined *non-negroid* males and females fall, with two exceptions, within the leptorhine group, and, in the two exceptions, lie only half a unit within the leptorhine side of the mesorhine sub-division. In regard to the facial index the distinction between the groups is admittedly not so great, but, with one exception, viz., that of the Ptolemaic period, the "*medians*" of the *negroid* males and females are all mesoprosopic, whilst in every instance the "*medians*" of the *non-negroid* group fall well within the leptoprosopic sub-division.

Dr. Keith admits the difficulty of selecting "the marks by which a negro's skull can be recognised," and goes on to point out that it is only by a combination of features that the selection can be made. Accordingly, he subjects our groups to a further analysis, with the following results:—

I. In regard to the projection of the ascending nasal process of the superior maxilla he admits that "those skulls assigned to the negroid group by the Oxford standard do "possess a slightly flatter nose than the non-negroid."

II. In regard to the types of pyriform aperture his conclusion is that "the "'negroid' Egyptians show a slightly greater approach to the negro type than the "non-negroid Egyptians."

III. Dr. Keith in his third table compares the "means" of the absolutes of nasal height, nasal width, upper facial height, and bizygomatic width, a comparison which in my opinion is of extremely little value since it altogether disregards the total height of the figure and misleads us by possibly comparing the short with the tall. Thus it would be easy to get many Englishmen with longer arms than have negroes, but the proportion which exists between the limbs and the body height might, and would, be altogether different.

However, assuming, for the sake of argument, that his method is justifiable, what is the result? It appears that "in absolute width and height the nasal aperture of the "negroid Egyptians approach the true negroes more nearly than they do the non-negroid "Egyptians." . . . That, "as far as the absolute facial height is concerned, the "Egyptian negroid is more a negro than the real negro, while in absolute breadth of "face he is a true non-negroid Egyptian and not any longer a negro."

In regard to the sexual difference in skull capacity to which he refers Dr. Keith would, I think, be the first to admit that it would be hazardous to employ it as a criterion of race difference considering the present state of our knowledge.

Thus, on Dr. Keith's own admission, *it is apparent that our negroid group exhibits negroid affinities in all the tests to which Dr. Keith has subjected it, absolute breadth of face alone excepted*, and yet he concludes by stating "that the criteria relied on by "Professor Thomson and Mr. MacIver to distinguish a negroid from a non-negroid race "break down when submitted to analysis, and his theory of a dual race in ancient "Egypt becomes untenable." Surely Dr. Keith either shows an excess of caution in accepting conclusions which may be to him unexpected, or possibly does not realise the full meaning of the facts which he himself has brought forward. Still more striking, however, is the admission that "there are facts which can best be explained on the "theory of a certain infusion of negro blood in the race." What that means I must leave your readers to judge, or Dr. Keith to explain. In our researches we confined ourselves strictly to the examination of the material at our disposal; if the facts of history confirm our conclusions, well and good; but, meanwhile, we have endeavoured to approach the subject from an independent standpoint, and our conclusion is that the skulls we have examined are not those of a homogeneous race but exhibit such distinctive features as justify us in classifying them into negroid and non-negroid groups. Nothing that Dr. Keith has said has shaken that belief, rather, as it appears, has he added support to our conclusions—conclusions which, I think, are amply justified by the facts, and enforced by the composite photographs published in MAN, 1905, No. 38.

Finally, I may add that, in the absence of Mr. MacIver, I am alone responsible for the opinions herein expressed.

ARTHUR THOMSON.

Africa, South-West. **Mullen.**

Fetishes from Landana, South-West Africa. *By Ben. H. Mullen, M.A., Curator of the Salford Corporation Museum and Art Galleries.* **59**

These remarkable fetishes (Figs. 1 and 2) were very kindly sent to the Salford Museum in 1898 by Mr. Arthur Clare, who was at the time engaged in Chiloango, Landana. The following is the interesting account which Mr. Clare gives of the fetishes and their uses:—

MANGAKA (Fig. 1).—A large wood male figure, the front of the body studded with nails, knife blades, and screws; the eyes inlaid with shells; portions of the beard, made from goats' beards, remain on the chin; armlets and wristlets are carved on the arms; on the head is carved a woven cap. The fetish power lies behind the shell which is inserted in front of the body. Mangaka is the men's fetish.

KOZO (Fig. 2) is the women's fetish. It consists of a wood figure of a dog with a head at each end (*see* note); the body is studded with nails as is the case with

Mangaka. On the back a shallow receptacle is constructed, and in this lies the fetish power. This hollow was originally covered with a mirror.

Preparation and Use.—When a group of natives, a band or a family, settles down and forms a new village they first mark off a plot of ground for sacred purposes, and on this they plant a tree—the fetish tree. The tree chosen for the purpose is always one of which the sap is blood-red. After the planting some of the sap is mixed with the blood of a wild fowl. The fowl is then buried, and after it has become entirely decomposed the ground, tree, and everything associated with them, become sacred and receive fetish power. In the tree are placed mirrors, shells, &c., similar to those in the fetishes, behind or in which the fetish power accumulates. These objects are affixed to the fetishes by clay which has been moistened in the mouth of the fetish priest. The priest erects his hut on the ground, and there produces the fetish gods.

FIG. 1.—MANGAKA, MEN'S FETISH, FROM LANDANA.

When a native suffering from sickness, theft, loss, &c., desires assistance from the fetish god he first consults the priest, paying him in kind, in order to discover the cause and origin of his trouble. In the case of sickness the priest could sell a charm without consulting the god. This charm might be a small image or other amulet, or a shell threaded on a hair from an elephant's tail, or, in case of small-pox, a strip from the skin of a leopard. Should the priest be unable thus to afford protection or relief, the native is advised by him to apply directly to the god. Here a further payment is made, and the native is allowed to drive a nail, knife, screw, or spear-head into the figure. In the case of Kozo and Mangaka the result of this action is to secure priority of claim to the protection of the fetish. The god may bring sickness or injury to the offending person or relief to the sufferer who has secured his favour. If the offender be not already known, the priest, who exercises an awesome power over the natives, sets to work to discover him. It sometimes happens that the criminal is so terrified that he denounces himself. Should he be wealthy and have influential friends he can occasionally arrange matters and "square" the priest, but then some innocent person would suffer instead. Should anyone, however, die in a neighbouring town the priest can, of course, say that he or she was the culprit, and had died by the power of the fetish to which the appeal had been made.

In the case of a more powerful god named M'Bialla Mandemba, who holds a weapon in his uplifted hand, the death of the intending person would be brought about.

With some inferior gods the insertion of the nail brings the native good luck while fishing, hunting, or otherwise engaged.

Note sent in April 1904 by Mr. Clare to Mr. Mullen.—"In describing Kozo "I call it a double-headed dog. In your museum the fetish has only one head, but it "originally had two. The missing one was lost when I left the two fetishes in a "store that got flooded while I was up the Chiloango river. In fact, neither of the "fetishes is in the exact condition it was in when I obtained them from the Portu-"guese Government for acting as intermediary in a palaver between them and "the natives. It may be of interest to know that owing to the great abuses of the

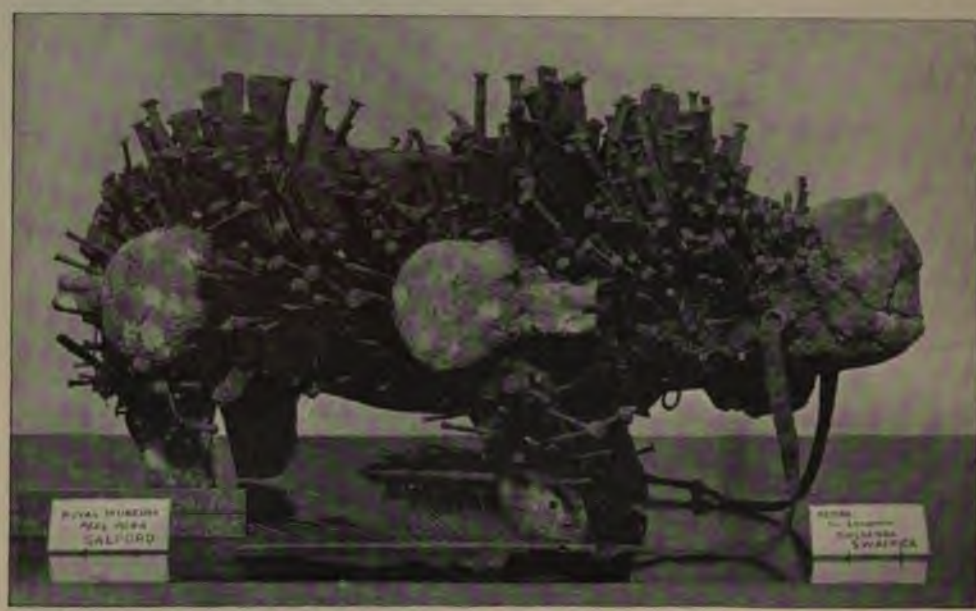


FIG. 2.—KOZO, WOMEN'S FETISH, FROM LANDANA

"fetish priests the Portuguese Government determined some six years ago to destroy "[all] the fetishes; but notwithstanding the destruction fetishism is just as it was then."

Mr. Arnold Ridyard, chief engineer of the Elder Dempster liner "Nigeria," an enthusiastic collector, who brought the figures to Salford, stated that the Krooboys on board his ship rushed in terror from Mangaka, and declined to carry or even approach the figure.

BEN. H. MULLEN.

America, South: Animal Superstitions. **Sadleir: Thomas.**

Animal Superstitions among the Araucanians. *By C. A. Sadleir. Communicated by N. W. Thomas.* **60**

Mr. Sadleir was good enough to collect the following information on animal superstitions among the Araucanians in answer to my questionnaire, *Journ. Anthr. Inst.*, XXXI. 114. I am much indebted to him for the information:—

1.—(*a*.) Seeing an eagle when on a journey. If the bird has its head towards the traveller, on the right, it is an augury of a good trip, of good luck; but if the bird is looking the other way it is a sign of bad luck.

When a bird called the *chucao* utters a loud note it is a sign of bad luck whether one is on a journey or not. When it cries softly it is a good sign.

If a snake crosses the road in front of one, where he is about to pass, it is a bad sign, and one ought not to tread upon that soil any more. The *machis* (medicine women) value the snake, for they seek it to pass it over the bodies of the sick, in order that it should carry the sickness to the Evil One. A chief told me that when his wife's brother was sick, he (the brother) had to learn to be a *machi* (in a few cases men become such). The snake left the house dancing after being passed over his body. This was in the midst of a great feast, which lasted three or four days. The man himself told the chief of it.

(*b.*) The Chilians (lower class of Romanists) sometimes say that, if one sees a snake or a lizard before breakfast, it drinks the blood of the Christians. The Chilians are about half Spanish, and have Araucanian blood in their veins, though the line of demarcation between them and the pure Indian is clearly marked.

(*c.*) Some of the lower class of Chilians also say that when a woman is about to give birth to a child, and she sees an "animal of the water" (legendary) the baby takes the form of the animal. They also say that the "eggs of the rooster" turn into serpents, which they call *Colocolo*. When this gets beneath the house it kills the family. A chief in the Andes burnt his house and moved to another place because many died. The same thing had happened there.

2. No animals are said to bring luck or ill-luck to the house in which they live.

3. A bird called the *kongkong* when it cries much near a house at night, "We we," is said to foretell a death. Also when the owl (called *kilkil*) cries near the house; also when a bird called the *punchiuku*, or the fox, does the same thing.

9. Only at their religious ceremonies or prayer meetings. In the Argentine the Indians kill a bull, or other white animal from the horses or cattle. In Chili a sheep. Prayer is made with the blood of the heart, but they do not worship any object (inanimate). Sometimes in the feast they cut off the head of a rooster and let it jump about. It is a good sign when the neck remains towards the East. This about the rooster is, I think, a Chilian-Spanish idea.

11. No. With this exception that at the feast of initiation of a machi they have a lamb tied, and when they let it go, if it goes straight to the flock that is a good sign.

14. The only special usages are to take out the heart, the blood is placed in a tree which has been transplanted or cut down and replanted. A man will often put on the skin of the sheep, over his head, and go about the tree at the time of the machi dance, following the machi or machis.

16. The only thing is that some say a witch goes about crying like a fox.

21. Only at death. In former times the horses or the favourite horse of the deceased was killed. In all such cases, and such as are covered by No. 9, the flesh of the animals is eaten.

22. Only that horns of rams are planted or put in new fruit trees that they may give good fruit, and may not dry up, &c.

24. Only children at play.

25. Only when a chief or his son dies a horse or horses are killed. They put it on its knees, mouth down, so that the deceased may go on horseback. Food, &c., is placed upon the coffin which is like a dug-out canoe.

28. No.

29. In former times in the Argentine, when a great hunt was held, before the animals were surrounded, the hunters drew themselves up in line, and with a knife passed through the skin at the back of the hand between the thumb and first finger extracted the blood, and prayed to God to give them his "outside" animals.

N. W. THOMAS.

REVIEWS.

Africa, South. **Hall.**

The Great Zimbabwe. By R. N. Hall, F.R.G.S. London: Methuen, 1905. 23 × 14 cm. Price 21*s*. **61**

This book is principally devoted to a description of the most important of the Rhodesian ruined buildings. The author has experience gained in two years' work of exploring this group of ruins for the British South Africa Company, and also that acquired from personal investigations of several previous years in other ruins situated in other parts of the same country. The customs, chief characteristics, language, and the origin of the natives now occupying the country, have evidently been carefully studied. References to these, together with descriptions of the locality, surmises as to whom the builders of the edifices might have been, what was their worship, if any, and the meanings which might be read into certain styles of architecture or arrangement of stone work, all often considerably coloured with a romantic tinge, occupy the first five chapters. Some licence must, however, be conceded to the author, who is evidently an enthusiastic admirer of these ruins, and his digressions into the realms of conjecture relieve what might otherwise have been a dry record of the facts observed during the work of excavation.

The Makalanga—(the children of the Sun)—the natives, who at present live near Zimbabwe, are considered by the author to be some of the direct descendants of the "Mocarangas," who, according to the early Portuguese explorers of the sixteenth century, occupied this part of South Africa. Their chiefs, called the "Monomotapa," resided in the "Zimbabwes," although they were not apparently the original builders of these remarkable structures.

Chapter VI. is devoted to a description of the various articles or relics found in the excavation. References are also made to various objects found by other explorers. Gold worked into various forms is said to have been abundant, but the total weight collected is not given. Iron in the form of tools, bells, lamps, wire, &c., was also found in considerable quantities, most of these articles being considered by the author as being the work of mediæval or recent Makalanga, or, perhaps, of other South African tribes, who for short periods raided and occupied the country. The articles of gold are assigned a similar origin, but those of more delicate or artistic manufacture are credited to the "Ancients." Copper was found in several forms in the intermediate and higher of the excavated floors, none, however, being classed as "ancient" work. Beads of chalcedony, glass, ivory, bone, gold, copper, and brass were also discovered, some being comparable with mediæval Arab work. Fragments of glass, china, and pottery were also amongst the finds. Some of the former is considered by competent authorities as thirteenth or fourteenth century work. To the china is ascribed an Arabian origin. It is apparently more difficult to assign the pottery to a definite age or people; much is considered to be comparatively recent. The author claims, however, that there are some notable points of difference, and infers that some found on the lowest floors of the Elliptical temple, very heavy and of a light greenish-grey colour, must be exceedingly old. Articles of soapstone were also discovered in considerable quantities carved in what must be called a rough manner to represent birds, in one instance a crocodile, objects of presumably phallic worship, bowls, and ingot moulds. The author is evidently of opinion that the soapstone birds indicate a worship akin to that of the goddess Almaquah (Venus) the Morning Star. Near the end of the chapter it is noted that an interesting discovery was made of what the author considers a "trading station," or locality specially set apart for the mediæval Arab gold and ivory trades.

From the presence and positions of these different articles, the author deduces the apparently well-founded argument that these ruins were occupied, at intervals perhaps, by numerous and different tribes of people from the date of their erection up to nearly

the end of the nineteenth century. At the end of the chapter, and also on page 103, sections are given, the latter showing seven distinct floors or evidences of distinct periods of occupation. The seventh or lower floor lies *below* the level of a drain through which water would pass to the "inner parallel passage," and eventually by other drains through the outside of the main walls. This would indicate that this seventh floor belonged to a building, possibly one of many, erected before the walls of the main building itself, and demolished to give room for the larger and more important structure now standing. This may explain the presence of other lines of stonework referred to as passing under, but not forming part of, other walls.

Chapters VII. to XIII. deal with what is termed the "Ancient Architecture," although the term sounds somewhat pretentious when applied to what are really only walls of roughly-worked stone. The author claims to have noticed certain differences in the style of construction and in the relative positions of certain portions of the ruined walls, which also bear out the theory of different epochs of habitation by different peoples.

The author emphasises the absence of any form of inscription and the non-discovery of burial places of the ancient inhabitants. He inclines to the opinion that the ruins are the work of Sabeo-Arabians. He, however, remarks that investigations among the ruins in southern Arabia are not sufficiently advanced to enable a comparison to be made between them and the Rhodesian ruins. He classifies the stonework of the ruins as follows :—(1) Most ancient period, characterised by rounding of ends of walls and buttresses, more decided batter, notable evenness of courses and better bonding; (2) a more recent but also an ancient period, possibly of reconstruction, with greater irregularity of stonework, less batter to the walls, and, as the most distinctive feature, square corners and ends to walls which are deficient in strength and durability; (3) mediæval Makalanga or Arabian work; (4) constructions by comparatively recent indigenous peoples. The numerous and excellent photographs with which the work is well illustrated, together with the plans and sections, give opportunities to the reader to study these differences in construction.

Mr. Hall apparently attaches great importance to the supposition that the main east wall, conical towers, platform, and original portions of the passages are the oldest walls, for which great antiquity can be claimed, whereas the western wall is a much later and inferior construction. This contention appears somewhat strained, as in most of the larger Rhodesian ruins what may be called the back or the least decorated portions of the walls is of decidedly inferior work to that of the front or principal portion. The change, however, takes place very gradually, and it is difficult to say, as he himself states regarding Zimbabwe, where the change begins. In Chapter IX. comparison is made between the plan, inscriptions, shape, and probable use of the temple of Marib, the ancient capital of the Sabœan kingdom in Arabia, and the Zimbabwe Elliptical temple. In both cases the pattern or inscribed portion of the wall is referred to as well built, whereas the remainder is called badly built and rough. It seems, therefore, that no special significance need be attached to the inferior work of the Zimbabwe west wall.

In the latter part of Chapter VI. several pages are devoted to the description of typical entrances, and it asserted that the balance of evidence is in favour of these having been built open to the sky, or not in the form of doorways with an overhead wall carried by lintels. Photographs given by the author show either lintels in place, or the broken-down wall, strongly suggesting that owing to the giving way or destruction of the lintels the superstructure has fallen down. The term lintel is also freely applied to long slabs of stone, and it is noted that in two angular entrances in the Acropolis butts of broken slate lintels still remain in the walls. In other Rhodesian ruins there is clear evidence that wooden posts were placed in the entrances purposely to carry lintels.

The author considers that the large elliptical building was constructed mainly as a temple for the purpose of sun, star, and, nature worship, the monoliths, towers and

decorated portions being referred to as evidences. At the same time considerable care is inferred to have been taken to provide obstacles against sudden inroads or attacks of an enemy. The Acropolis, or hill ruin, is considered to be a distinctly designed fortress adapted to the methods and weapons of war then in vogue. Two of the enclosures in the Acropolis are referred to as being temples for worship of the same class observed in the main ruin.

The "Valley Ruins" seem to correspond to dwellings of chiefs and common people during ordinary times, although they also show arrangements for defensive purposes.

The Acropolis ruins are described at length in Chapters XIV.–XVIII., but the work of exploration is evidently far from being completed.

The remaining chapters are taken up with descriptions of the valley and other ruins lying within the Zimbabwe area, and, although they cover considerable ground, they do not, apparently, offer such instances of interest as the main ruin and the Acropolis.

The appendix contains reference to the Government restrictions for unauthorised visits and excavations, destruction of walls, prohibition of removal of relics and penalty for infringement.

An inventory of relics and "finds" is also given with the localities from which they are taken.

The author can be congratulated on having produced the most useful work on Zimbabwe yet published, and, although he has, apparently, irresistibly been led away at times into the realms of romantic reconstruction, he is by no means such a transgressor as some other writers. The photographs, plans, and sections produced, and the facts brought forward, will be, not only of interest to the general reader who finds pleasure in the study of ancient history, but will be of great assistance to those whose experience and study has specially qualified them to pronounce opinions on the problems of—who were the builders, and when and for what purpose were the buildings erected?

FRANKLIN WHITE.

Africa, East. **Hollis.**

The Masai: their Language and Folklore. By A. C. Hollis. With Introduction by Sir Charles Eliot. Oxford: Clarendon Press, 1905. Pp. xxxii + 364. 27 plates and a map. 23 × 16 cm. Price 14*s.* net. **62**

Mr. Hollis has given us, not only the fullest study of the Masai language which has yet appeared, but a most valuable *résumé* of customs, traditions, and myths, gleaned entirely from native sources, and twenty stories, all interesting from the folklore student's point of view. The latter, as well as the proverbs and songs, are given both in the original, and in an interlinear literal, as well as a free, translation, and are, therefore, important linguistic documents. The language is unhesitatingly classed by Professor Meinhof as Hamitic, by other authorities as "Nilotic"; its nearest relations appear to be Latuka and Bari. Sir H. H. Johnston postulates a "Masai-Turkana-Bari" stock, including Nandi as a sub-stock, distinct from, but related to, the "Nilotic."

Very marked features in this language are the existence of grammatical gender—and consequently of masculine and feminine articles—the complicated rules for the formation of plurals (by suffix, not prefix), the impersonal passive, and the very full development of "derivative verbs"—otherwise called "forms of verbs" or "verbal species." This last may be compared with Hebrew on the one hand, and the Bantu languages on the other, but we suspect that it is common to all primitive speech, where the idea of tense is as yet extremely vague. As the moods and tenses become more clearly defined, the derivatives are less needed. The tales collected by Mr. Hollis are either (*a*) animal stories of the familiar Bantu kind; (*b*) *Märchen*, several of which can be referred to recognised types; (*c*) stories such as "Greed of the Old Man and his Wife," "The Father of Marogo," and "The Two Dorobo," which might almost be

described as rudimentary novels. They contain no element of the marvellous, but depict traits of character—usually in a more or less ludicrous light. Two of them are at the expense of the despised Dorobo people. Under (*c*) might be reckoned "The Warrior and his Sisters," but as it professes to explain the origin of the Masai "peculiar institution," it might also rank as an ætiological myth. (In this connection it may be pointed out that the laws detailed on p. 312 surely indicate a survival of group marriage.) "The Two Wives and the Twins" might, in some respects, be classed under the same heading, but it is clearly a "Rhea Silvia" story, shorn of its more obviously mythical traits. Substantially the same tale is given by Merker (p. 219) under the title, "Die Strafe Gottes," where, we may note, the wicked wife is a Dorobo woman.

All the traditions obtained by Mr. Hollis seem to represent the Dorobo as originally different from the Masai. "We were told by the elders," says Justin Ol-omeni, "that "when God came to prepare the world he found three things in the land, a Dorobo, an "elephant, and a serpent." Two different accounts are given of the way in which the superior energy and attention to business of the Masai put them in possession of the cattle which the Dorobo either already had or were about to receive. Merker, however, shows that the Dorobo are, in the main, Masai, and are divided into three branches, the Asá, Il Asiti, and Il Gasurek. The first are the remnants of the earliest Masai invasion, who, having lost their cattle through disease and the raids of the Tatoga, were finally driven out by the second body of invaders—the Il Kwafi—and forced to take to hunting. The Il Kwafi, after long wars with the third and last horde, the Il-Maasae, divided into several branches, of whom the Il Asiti were one, while the Il Gasurek consist of unfortunates among the Masai proper, who have fallen on evil times (*Die Masai*, pp. 6-9, 221, &c.).

We may mention, in passing, that Merker objects to the name "Il Oikop" for the "German Masai;" it is merely an abusive name applied by the Dorobo, the Wakwafi, and the smiths to their Masai oppressors. The interpretation "possessors of the land" is quite erroneous—the correct form for this would be *ol open l'en gob*. The names of the Masai clans as given by Mr. Hollis and by Merker are identical, except that the latter enumerates three instead of four, omitting the Il Mokesen. He also gives some further interesting particulars about the Il kiporon family, who are not only hereditary snake-charmers and rain-makers, but are also supposed to be of superior sanctity, and therefore less addicted to fighting than the Masai in general. On the whole, the two accounts, so far as they deal with matters of direct observation, confirm one another in a remarkable way; differences of any importance are probably due to variations of local usage.

The existence of an outcast clan of smiths (like the Tumalod among the Somali) naturally reminds us of the gypsies and tinkers of Europe. Mr. Hollis's native informants give no reason for the contempt with which the *Il kunono* are regarded, or for the fact that "it is considered improper" for a Masai to take weapons from a smith without first oiling his hands. The explanation given to Merker, viz., that the smith's occupation is imputed unlucky, because its principal object is the manufacture of weapons, and bloodshed is forbidden by the Divine command, does not sound very convincing in the case of so warlike a people, who look upon raiding as the only activity worthy of a man in his prime. Yet, if the account above referred to, of the *Il kiporon* —the "holy clan," who refrain as far as possible from bloodshed—be correct, we might see in it an acknowledgment that the fighting life is only a forced accommodation to circumstances, condemned by the best men. The Masai, like other nomadic and pastoral people, are not conspicuously skilled in mechanical arts. "Some Masai women are "able to make earthenware pots"—the universal feminine accomplishment in Bantu Africa—"others who are unable buy them"—as well as tobacco, beer, vegetable food, and various other necessaries and luxuries "from the savages." Indeed, these unfortunate

"*il meek*," for all their inferior position, would seem to play an important, if not an indispensable, part in Masai life.

The peculiar dietetics of the Masai were fully, and on the whole accurately, described by Joseph Thomson, the first European who was able to study them to any appreciable extent. The use of blood drawn from the living animal as food (illustrated by the excellent photograph here reproduced which shows the method of bleeding by shooting a blocked arrow into one of the superficial veins of the neck), is characteristic

MASAI DRAWING BLOOD FROM AN OX BY SHOOTING A BLOCKED ARROW INTO ONE OF THE SUPERFICIAL VEINS OF THE NECK.

of the Masai, and apparently also of the Bari. Perhaps the express and repeated prohibition in the Old Testament may be taken as showing that it was formerly universal among pastoral tribes.

A full appreciation of this excellent work is precluded by limits of space. Among the numerous and interesting photographs we may mention (in addition to the one already referred to, and here reproduced) Plate II., a Masai elder in a fur cloak; Plate IX., a young married woman; the group of women (showing the peculiar ornaments) in Plate X., and the two portraits of Ol- Onana in Plate XXIII. This chief is usually called "Lenana" by Europeans, through assimilation of the article, and many names now current, and we suppose firmly established, such as Naivasha, Laikipia, &c., are due to a similar mistake. Conversely, it seems strange that the name Eujámusi should have been rendered by Thomson and others as Njemps. A. WERNER.

Tibet. **Waddell.**

Lhâsa and its Mysteries, with a Record of the Expedition of 1903–1904. By L. Augustine Waddell, LL.D., C.B., C.I.E., F.L.S., F.A.I., Lieut.-Colonel, Indian Medical Service. London: John Murray, 1905. 24 × 15 cm. Price 25*s*. **63**

The mystery which once surrounded the famous city of Lhâsa has now been finally dispelled. Many accounts of the last expedition have been published, but none so complete and authoritative as this book. Colonel Waddell has by long study of the language, literature, and religion of Tibet prepared himself to be the historiographer of

the Mission, and his graphic narrative is worthy of the occasion. It is, of course, not the case that General Macdonald, Colonel Younghusband, and their comrades were the first Europeans to visit the sacred city. The list of travellers begins with Friar Odoric, who arrived about 1330. He was followed by the Jesuit Grueber and Count Dorville in 1662. Next came a party of Capuchins and the Jesuits Desideri and Freyre in 1766. As for Englishmen, it is doubtful if Moorcroft reached the city, but Manning, the friend of Charles Lamb, certainly saw it in 1811. The last Europeans who visited it before the recent Mission were the French Lazarist priests, MM. Huc and Gabet, who arrived in 1846. During recent years some native emissaries of the Indian Government have also penetrated as far as Lhâsa, of whom the most eminent is Bâbu Sarat Chandra Dâs, a Bengali.

In the recent expedition the members were so fully occupied in severe marching, fighting, and diplomacy that it would be unreasonable to expect much fresh information on the ethnology of the country. The references to prehistoric man are slight, and serve only to excite interest in a field absolutely unexplored. In the Yandok valley some prehistoric caves were observed. "Excavation here would doubtless reveal "deposits of much interest regarding the earlier physical character of the Mongolian "race, which curiously in its present-day features approximates to the large Asiatic "ape, the orang-outang—just as the negro approximates to the great ape of the "African continent, the gorilla. The position of these caves, too, near the former "shore of that old sea, whose bottom, uplifted by the rising of the Himalayas, forms "the plateau of Tibet, are thus all the more likely to contain traces of primitive man." No flint weapons were discovered, but a large number of neolithic implements has lately been found on the outer hills, at Kalimpong in British Bhotan.

The excellent photographs with which the book is well supplied will be of much help in working out the physical types. Colonel Waddell recognised on the march two well-marked varieties of men, "one round-headed, flat-faced, and oblique-eyed, approxi- "mating to the pure Mongol from the Steppes (Sok), the other long-headed, with nearly "regular features, a fairly shaped long nose, with a good bridge, and little of the "'Kalmuk' eye, approximating to the Tartars of Turkestan and the nomads of the "great Northern Plateau (Hor)." To this second type belonged most of the nobility and higher officials. The stature of the people of Lhâsa itself is even less than that of the Chinese, and much below the European average; but the men from the eastern province of Kham are quite up to that standard. In colour the people generally are light chocolate, and the better class and a large proportion of the women are almost as fair as a south Italian.

The account of the shrines of the sacred city with their images and ritual, now for the first time examined by a competent authority, is full of interest. Buddhism, of course, reached Tibet from India, and we may naturally enquire what survivals of Indian custom and belief are still to be found. The most remarkable is certainly the community of entombed hermits which were found about fourteen miles from Gyantsé, one of the halting-places of the Mission. Their attendants had no resemblance to Buddhist monks, and with their long matted locks were much more like Indian ascetics. About twenty caves were found on the rocky hillside, the entrances built up with masonry and provided with stout padlocked doors. The only other opening was an aperture like the door of a rabbit hutch, just large enough for the hermit to pass out a hand for his daily meal of parched grain and water. In this dark cell the hermit is immured. He has no means of distinguishing day or night, and "his only communication with the world is when "his daily food is left on his sill, and then by his vows he is bound to let in no light and "not to peep out. He can see or talk to no living person throughout his confinement."

In one case the hermit was said to have been secluded for twenty-one years. When Colonel Waddell tried to interview him, all he could see was a gloved hand

slowly protruded through the orifice. Some of the younger men who had already performed the first course of this terrible penance were obviously on the road to become idiots. Here we have clearly a living community practising the austerities of the ancient Hindu ascetics, which their successors have now practically abandoned. The drawing of one man drinking from his skull-cup is an exact representation of the loathsome Aghoris, who are happily now disappearing from India. The Himalaya has always been the headquarters of Indian asceticism, and, if it were possible, which is clearly not the case, to obtain from the members of this community some historical details, it would supply the materials for a very interesting chapter in the history of Indian monasticism.

Colonel Waddell in his valuable work, *The Buddhism of Tibet*, had already collected evidence to show in how degraded a form the teaching of the Master, contaminated by the local Animism and the Tantrik mysteries of Indian Sâktism, now survives north of the great mountain range. The details which he gives here only intensify the gloom of the picture. It is startling to learn that the holy city contains a shrine of Kâli, the dread Indian goddess of pain and death. She is called the "Great Queen," but she is so dreaded that her name is seldom uttered, and then only with bated breath. Her form is even more repulsive than that of her Indian sister; "she is made "to be a hideous black monster clad in the skin of dead men and riding on a fawn-"coloured mule, eating brains from a human skull, and dangling from her dress is the "mystic domino of fate containing the full six black points; and as the goddess of "disease, battle, and death, she is surrounded by hideous masks with great tusks and "by all sorts of weapons—antediluvian battle-axes, spears, bows and arrows, chain "armour, swords of every shape, and muskets, a collection which gives her shrine the "character of an armoury. Libations of barley-beer under the euphemistic title of "'golden beverage,' are offered to her in human skulls set upon a tripod of miniature "skulls. Her black colour is held not only to symbolise death, but profundity and "black magic, like the black Egyptian Isis and the Black Virgin of middle age "Europe." A shrine like this, with the slaughter-houses from which the Lamas draw their meat supplies, is a fitting accompaniment of Buddhism in its Tibetan form.

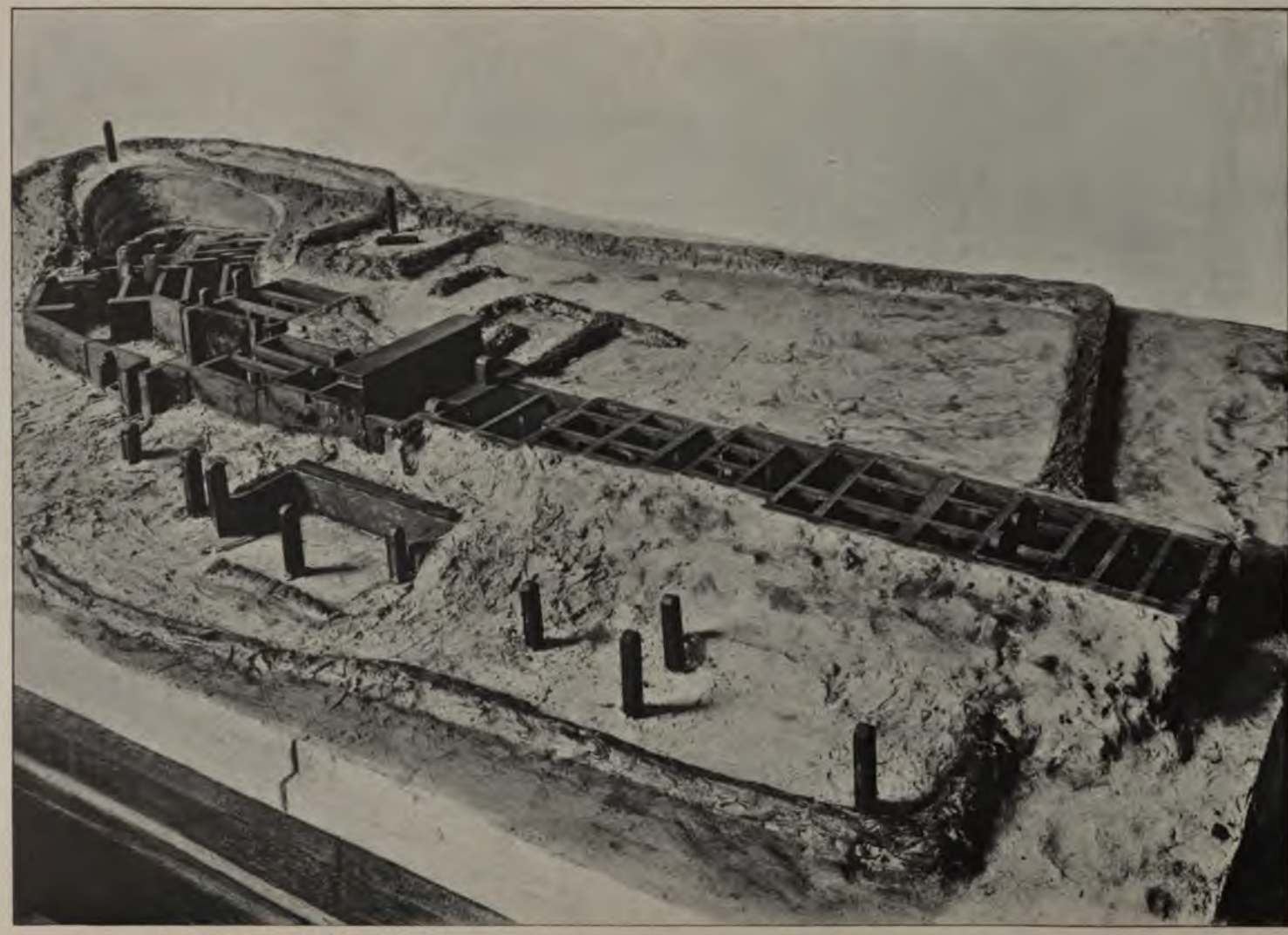
It is impossible here to draw attention to the many questions of anthropology and folklore discussed in these pages. The Tibetan speech, with its scanty vowels and numerous consonants, is directly the result of the inclemency of the climate: "so full of "consonants are Tibetan words that most of them could be articulated with almost "semi-closed mouth, evidently from the enforced necessity to keep the lips closed as "far as possible against the cutting cold when speaking." In their art work the colour-sense is well developed, but they have no specific names for any but the most rudimentary colours, and we have thus additional evidence, if it were needed, to confute the theory of Mr. Gladstone, who suggested that the Homeric Greeks were either colour-blind or deficient in colour perception because their terminology was inadequate. Colonel Waddell discusses the revolting custom of disposing of the dead by leaving them to be devoured by beasts and birds, and corroborates the conclusion of Bogle that the habit is to a large extent the result of scarcity of wood for cremation and the difficulty of excavating the frozen soil for graves. At present only the bodies of Lamas and those dying of small-pox and other infectious disease are burned. In ordinary cases "a man carries the dead body doubled up in a sitting posture and tied in a piece "of a tent or blanket, deposits it upon the recognised place on the rock, and then he "and the attendant Lama proceed to cut off the flesh in pieces, so that the vultures and "ravens can devour it."

Enough has been said to indicate the value of this scholarly book to all students of the religion, ethnology, and folklore of Tibet. W. CROOKE.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

THE CAVES WITH ROOF REMOVED.

THE SANCTUARY. THE PYLON. THE PILGRIM CHAMBERS. OUTER WALL.



THE STELES OF MINING RECORDS.

MODEL OF THE TEMPLE AT SERABÎT EL KHĀDEM.

ORIGINAL ARTICLES.

Sinai: Archæology. With Plate H. Petrie.

The Sinai Expedition, 1904-5. *By W. M. Flinders Petrie, D.C.L., F.R.S., F.B.A., Edwards Professor, University College, London.* 64

The scantiness and incompleteness of our knowledge of the Egyptian remains in Sinai induced me to devote a season to exploring those settlements. Of the 250 inscriptions, which we copied in full size facsimile, few had been completely copied before, and many were entirely new to us. The temple of Serabīt el Khādem was only known by small plans of those walls which happened to stand up amid the ruins, and no intelligible view of it could be had until we had recovered the larger part of the structure which was yet unknown. The very purpose of the mines was uncertain and mis-stated. Our party consisted of four to six Europeans and twenty eight Egyptian workmen, most of whom were brought from Upper Egypt by Mr. Currelly across the desert and the Red Sea. The first centre was at Wady Maghārah, at a distance of five days' camel

FIG. 1.—FLINTS USED BY INDIGENOUS TURQUOISE HUNTERS.

journey from Suez. Half of the inscriptions there had been destroyed by recent mining; the remainder we copied, and—at the request of Sir W. Garstin—all but one of these inscriptions were cut out by Mr. Currelly and removed to the Cairo Museum for safety. The main anthropological results were the re-discovery of the large scene of the King Semerkhet of the I Dynasty, which is the oldest known figure group on a large scale, and the discovery of a scene of King Sanekht, the founder of the III Dynasty. He has Ethiopian features, even more strongly marked than those of the Ethiopian kings of Egypt of later age. The rapid declension of sculpture by the reign of his successor bears out the view of an Ethiopian conquest of Egypt overthrowing the II Dynasty and beginning a new era. The mine heaps were also examined. Great numbers of flints worn by working in the sandstone were found, but scarcely any were from the heaps from Egyptian mines with inscriptions, and hence the flints were probably the

tools of Bedawin workers of various dates. In the Egyptian heaps the hammers and picks of basalt were common, showing what tools they used. All of the mines here were for turquoise, fragments of which abounded in the mine heaps. No copper ore was found here.

We then moved some miles northward to Serabīt el Khādem, where the temple ruins cap the plateau of sandstone. This site of worship is certainly very early, as a limestone figure of a hawk with the name of Seneferu in contemporary hieroglyphs takes it back to the end of the III Dynasty. This king is often named in later monuments here, and also Mentuhotep of the XI Dynasty. The XII Dynasty has left a continuous series of remains of every king. The principal work was under Amenemhat III., who executed the sacred cave, and his successor, who faced the front with sculptures. It had been supposed that this cave was originally a tomb for an official who is named on the wall, but as we found in it an altar of the goddess Hathor, dedicated by Amenemhat III., with the name of this same official, it is clear that there is no ground for this being other than a rock shrine. The officials who were sent here placed their names far more freely on all the monuments than was the custom in Egypt.

FIG. 2.—GRANITE PICKS AND CRUSHERS USED BY EGYPTIANS.

The cave and courtyard before it were all that was arranged in the XII Dynasty. A thousand years later, in the XVIII Dynasty, Amenhotep I. reconstructed the cave front; and then Hatshepsut and Tahutmes III. built several chambers and courts extending far before the cave, and also cut a second and smaller cave for the god of the east, Sopd.

In front of this temple proper, four other kings added a series of pilgrim cubicles, down to Sety I.; and later kings put up tablets or made alterations until Ramessu VI., after whom the place fell to decay. The whole purpose of the worship here was to propitiate the goddess of turquoise in the interest of the miners who came here.

The main interest of the temple is as giving an insight into early Semitic worship. Our excavations showed, what had never been suspected, the prominence of ceremonies of ablution. A tank was placed at the door of the temple; the largest covered court had a circular basin in the middle of it surrounded by four pillars, and another tank in the corner next to the exit door; while the next largest court had a long tank in the midst with four pillars around it. These show for certain how important the ceremonial of ablution was in the worship here; and they are the direct counterpart of the laver of the Jewish Tabernacle and the Brazen Sea of the Temple, while the *hanafiyeh* court of the Muhammedan mosque shows how essential such a system still is in Semitic worship.

Another great feature was the immense quantity of burnt offering on the hill ridge before the cave. For more than a hundred feet in length stretches a bed of wood-ashes, often as much as half a yard thick. The sacrifices on the high places are familiar in the worship of Palestine.

A third characteristic is the Bethel sytem, of oracular dreams and memorial stones, as in the story of Jacob. The custom of placing upright stones is very common throughout Sinai, as a token of a pilgrimage or passing visit, as it is in India, and they often show along a hill crest like the teeth of a saw. Over the mines and near the temple they are associated with rude shelters of stones, which are generally placed singly, and have no grouping like the more permanent huts of miners at Maghara. These are evidently the shelters for pilgrims who came to sleep at the shrine, and who probably slept in the cave itself until it was built up by the Egyptians. This system of incubation for oracular purposes was common in Syria, and extended to other countries. The later kings met it by providing cubicles in front of the temple, banked over with sand and stones so as to be substitutes for the sacred cave. The total length of the temple was about 250 feet.

The whole of the mines here were entirely for turquoise, as shown by the mine heaps and the geological level.

We see then three characteristics of Semitic worship, the ablutions, the burnt sacrifices on the high place, and the bethels and incubation system, all of which are familiar in Syria, and none of which belong to Egyptian worship.

Seldom has an expedition produced so much from a very small expenditure on excavation. We went to copy, and completed that subject with many fresh discoveries ;

FIG. 3.—STONE PILES AND BLOCKS ERECTED NEAR THE TEMPLE.

and the excavating has settled the purpose of the mines and shown for the first time the antiquity of these customs of Semitic worship, which the Egyptians adopted, just as Romans worshipped the local gods of the countries to which they went. The results will be published in an atlas of inscriptions and photographs by the Egypt Exploration Fund, and a volume of general descriptions with about 200 photographs, published by Mr. John Murray.

Now to my regret I have to notice some remarks, made by a visitor to Sinai in MAN for June, on my first brief letter in the *Times* announcing the general results. As it might be supposed that a student visiting the site had some ground for his confident statements, I am obliged to correct several points. The name is not "Sarâbit el-Khadm," but Serabīt el Khādem. The small plans hitherto published were only of such portions of the building as happened to be visible, and omitted large parts of construction now exposed. The steles in the shrine court are not "much older than the rest," the earliest steles being the long series in the XII Dynasty

approach to the temple. The temple was not "merely a little provincial Egyptian shrine," but a structure over 200 feet long, for the building of which many architects and masons were specially sent from Egypt at various times, as stated on the steles. The numerous Bethel stones in the neighbourhood are some of them inscribed by Egyptians, who adopted the local worship. No such system of stone records of visits are known in Egypt, no one familiar with Egyptian works could write that they "are "ordinary Egyptian monumental tablets of Egyptian type." That is even incorrect of the mining records in the temple. The Egyptian language does not make monuments to be of Egyptian type any more than a Latin inscription makes a gravestone to be of Roman type. The frequency of the memorial stones without inscriptions seems to have been unnoticed by this traveller.

More strange is it to read of the Babylonian temples, which were founded by Sumerians, as being Semitic. As that writer claims to be "more familiar with Semitic antiquities," perhaps he will state what points of distinctively Semitic rites can be traced in Babylonian temples. Certainly none of the strongly Semitic worship that I have described is obvious in Babylonia. The statement that it is "probable "that the ashes are the remains of the fires of the XII Dynasty copper smelters "who left their mounds of slag lying round the site" is indeed strange. An examination in the nature of materials is compulsory before entering the service of the British Museum, but that has not saved the objector from confounding natural beds of ironstone with supposed copper slag. There is no copper slag within six miles of the site, so far as I could find, and there was no copper ore at the level of the temple. A similar inaccuracy follows, where a view labelled "Turquoise mines and settlement," is that of a hill in which there is not a single mine; the "settlement" should be stated to be that of the temporary huts of the modern company now defunct. Some practical field-work in a school of archæology might have saved this writer from such errors, which his present training has not enabled him to avoid. W. M. FLINDERS PETRIE.

Egypt: Craniology. **Pearson.**

Note on Dr. Keith's Review of Professor Arthur Thomson's "The Ancient Races of the Thebaid." *By Professor Karl Pearson, F.R.S.* **65**

Dr. Keith in his review* states that: "One strange result of the statistical "investigation of skulls I cannot resist setting down here. While Professor Pearson "declares that a double-peaked frequency curve does not necessarily indicate a mixture "of races, Professor Thomson and Mr. MacIver maintain that a single-peaked frequency "curve may not mean that a race is pure or homogeneous. The cephalic indices of "the ancient Egyptians give a single-peaked curve of frequency; the upper facial "index gives a double-peaked curve. Because of the one, Miss Fawcett and Professor "Pearson regard the ancient Egyptians as a single race; because of the other, Professor "Thomson and Mr. MacIver maintain that they were a dual race."

I want at once to repudiate any such form of argument as to racial purity. From the standpoint of biometry, any argument as to the validity of a "peak" must depend entirely on a determination of the probable errors of the group frequencies and on the general goodness of fit measured by the now well-known "χ^2" test.

Writing in April, 1902, I said that to define heterogeneity as the existence of two peaks was an impossible definition:—

"Not only may two or many peaks occur in perfectly homogeneous material, but no peaks whatever in certainly heterogeneous material. It all depends on whether the peaks are significant or not, and on the distance between the modes of the mixed material."†

---

* MAN, No. 55, p. 95.

† *Biometrika*, Vol. I., p. 329. "On the Fundamental Conceptions of Biology."

I further pointed out that the discrimination of true modes is a most complex problem involving the theory of errors of random sampling.

In Miss Fawcett's Naqada paper it is distinctly stated that no stress whatever ought to be laid on "peaks" in such frequency distributions as occur in most craniological investigations. These "peaks" are chiefly due to the fact that we are dealing with *very small* random samples.*

In my recent controversy with Professor von Török the whole burden of my charge was that he had not regarded the probable errors of the frequencies which he asserted to have significance. His peaks were shown to be *Scheingipfeln* by the simple process of determining their probable errors.†

So far as I am aware, neither my co-workers nor I have ever argued simply from the existence or absence of peaks as to homogeneity or heterogeneity. Our arguments have been based on considering the probable errors of the group-frequencies of the distribution, or on applying the general criterion of goodness of fit which was originally given by me in the *Philosophical Magazine*, and tables for facilitating the use of which have been issued in *Biometrika* by Mr. Palin Elderton.

Accordingly it came rather as a surprise to me when I read Dr. Keith's review of Professor Thomson's book and was told that Miss Fawcett and Professor Pearson argue from the *single-peaked* frequency-distribution of the cephalic index for the Naqada skulls that the Naqada crania are homogeneous.‡

I have looked very carefully through Miss Fawcett's paper and can find no reference to the peaks of the cephalic index distributions at all. The question of heterogeneity or homogeneity is made in that paper to turn on two points:—

(*a*.) A comparison of the differences of the lengths and breadths of the crania from the earlier and later entombments, *having regard to their probable errors*. No substantial change is discoverable; but the treatment is not very conclusive, because the entombments which could be definitely assigned to one or other group were very few.

(*b*) A comparison of the variability of the Naqada material with that of other groups such as certain English and Bavarian crania. The Naqada material is less variable than either of these groups.

The memoir states that no stress whatever ought to be laid on "peaks" in the frequency distributions because they fall within the limits of the random errors of sampling, and this is illustrated by showing, *not* for the case of cephalic index, but for that of the breadths, that the deviations from a normal distribution—which, of course, has a single peak—fall well within the errors of random sampling.§ The case of breadth was chosen because the "peaks" of this frequency distribution had already been selected by one distinguished archæologist as a ground for asserting a racial heterogeneity. At this very point Professor Thomson's work fails hopelessly to attain to the proper standard of statistical science. He uses arguments drawn from a mathematical investigation of the frequency which is in itself inadequate. These arguments are based on the general appearance of irregularity and of deviation from curves, the constants of which are not calculated exactly. Further, in no single case has Professor Thomson's collaborator investigated whether a "peak" is significant or not; in no single case has he determined whether his material does or does not fit his curve within the errors of random sampling. Arguments based on such mathematical treatment are in the present state of statistical

* *Biometrika*, Vol. I., p. 441.

† *Craniological Notes*, I. *Biometrika*, Vol. II., p. 339.

‡ The statement is the more misleading because an examination of our frequency diagram shows that the distributions we published are *double peaked!*

§ In 83 out of 100 samples from normal material more marked "peaks" might be expected than actually occur. *Loc. cit.*, p. 454.

science as futile as those which are based on a perfectly arbitrary and untested definition of what does or does not constitute a negroid skull. Professor Thomson has hitherto failed to state the reasons which led him to adopt that definition or to give the series of pure negro skulls on which he *a priori* tested it before applying it. I am glad to see that Dr. Keith agrees that it is inadmissible. It is really a purely statistical question, but as Dr. Keith is an anatomist, we may expect the reply from Professor Thomson which he withholds from a statistician.

Lastly, Dr. Keith seems to consider that the biometric school has definitely asserted that the prehistoric Egyptian crania are *not* negroid. Dr. Keith writes: "In " Miss Fawcett's elaborate monograph the possibility of a negroid infusion is considered " but dismissed on account of the conformity of the curves of frequency with the curves " of probability given by the cephalic indices." I can find no passage whatever in the memoir corresponding to this statement. The actual position we have taken up is really very different from this. Two fundamental memoirs on the Naqada skeletons have been published by biometricians, that by Dr. E. Warren on the Long Bones, and that by Miss Fawcett on the Crania.

Dr. Warren concludes that in some characters the Naqadas were advanced or modern, in others inferior or primitive. "On the whole the proportions of the limb " bones to one another may be said to have approached those of the negro, while the " sacral and scapular indices were almost identical with those of Europeans."*

Miss Fawcett concludes that in total cranial height, auricular height, height and breadth of face, nasal height, cephalic index and upper face index, the Naqadas approached the negro. But in nasal breadth, height of orbit, palate length, and nasal index they are closer to the Germans. In length of skull, sagittal circumference, facial index, breadth-height ratio, and nasal index they are, perhaps, closest to a primitive race like the Aino. Thus the cranial results fully bear out the judgment from the long bones, *i.e.*, that the Naqadas were in some characters advanced or modern, in others inferior or primitive.†

The general conclusions are‡:

(1.) That the prehistoric Egyptians as represented by the Naqada crania appear to be as homogeneous as most short series which pass muster as racial unities.

(2.) The Naqadas do not seem substantially nearer to the negro, as judged by his modern representatives, than the historic Egyptian or the modern Copt.

(3.) In some characters they resemble the negro and in others the European.

Finally: "It will need a far more comprehensive study of modern and ancient negro " crania than has yet been made to see in its due proportions this negro and Egyptian relationship."§ These words are, I think, as true to-day, after Professor Thomson's volume has appeared, as when they were written in 1902. I believe such expressions as I have cited are sufficient to prove that the biometric school has neither asserted nor denied a negro relationship to the early Egyptians. What that school has contested is that the Naqada skulls are to any large extent a mixture of crania from different races. The extent to which the Naqadas were a *Blutmischung* or a mixed race is a totally different problem—one which the two biometric writers on the subject leave, as I have just shown, entirely open. I have already defined what I understand by a *race* in the case of man, the sense in which I think it has been fairly consistently used in our craniological memoirs. I doubt whether anything corresponding to a "pure" race exists in man, if by that term is meant a group absolutely without *Blutmischung*. Such a view would mean an indefinite number of special creations or independent evolutions of man. "The 'purest' race," as I have said elsewhere,‖ "is for me the one which has been isolated,

* *Phil. Trans.*, Vol. 189 B., p. 191.
† *Biometrika*, Vol. I., p. 436.
‡ *Biometrika*, Vol. I., p. 464.
§ p. 435.
‖ *Biometrika*, Vol. II., p. 511.

" intrabred, and selected for the longest period. It may well in the dim past have been " a blend of the most diverse elements."

One of the difficulties with which biometricians have at present to contend is the frequent erroneous presentation of their views. I certainly do not think this is intentional in the case of Dr. Keith, but I think it very important to assert that the biometric school never argues from the mere existence or not of "peaks" as to heterogeneity or homogeneity; and further, in the special case of the Naqada crania, it distinctly reserved its opinion on the negro and Egyptian relationship until a more comprehensive study of modern and ancient negro skulls had been made. Professor Thomson's volume contributes nothing to such a study, and, until it has been made with the proper use of biometric methods, we shall not be in a position to measure the amount of *Blutmischung* between prehistoric Egyptian and negro. KARL PEARSON.

Egypt: Archæology. Hall.

The Excavation of the XI Dynasty Temple at Deir el-Bahari, Thebes. *By H. R. Hall, M.A.* 66

The discovery of the XI Dynasty Temple at Deir el-Bahari and the progress of the work of excavation by the Egypt Exploration Fund during the season 1903-4 were described in MAN (May, 1904). Work was resumed at the end of October, and carried on without interruption to the middle of March of this year. It has not been found possible to complete the work of unearthing the whole building, but two-thirds or more of it have now been thoroughly excavated, leaving roughly a third to be done in another season's work.

FIG. 1.—CORNER OF PYRAMID BASE; JAN. 1904.

The progress of the work during the second season may be briefly described as follows:—

It will be remembered that the court separating the XI Dynasty building from the XVIII Dynasty Temple of Hatshepsu, and the north-eastern corner of the platform on which the former stands, with a colonnade of square pillars below and eastward of it, were excavated last year. At the end of the season we had a rough general idea of the nature of the temple and of the extent of the work that lay before us. It stood on a rectangular platform of rock, to which led a ramp flanked by colonnades, as in the Temple of Hatshepsu. Only the northern colonnade had been excavated, but there was no doubt that a southern one must exist beneath the *débris* beyond the ramp. The

centre of the platform was occupied by a remarkable construction of heavy nodules of flint, aligned symmetrically with the platform. The north-eastern corner of this was discovered at the end of the first season's work, and there seemed to me to be little doubt that it must be the pyramid of King Mentuhetep, which, as we knew from the texts, was situated at Deir el-Bahari. It was, however, advisable to say little or nothing about this until further excavations should prove the correctness of the idea. Fig. 1 shows the corner of the pyramid as it appeared when discovered in January, 1904.

FIG. 2.—WESTERN AMBULATORY WITH RUINS OF SHRINES.

This year's work had two primary objects in view—the uncovering of the pyramid and the southern lower colonnade. To get at the latter and free the ramp from the rubbish hiding it, it was necessary to drive a large trench up the further side of the ramp. One or two of the wooden beams with which the ramp was paved are still in position. The complete uncovering of the central erection, which had appeared to be the pyramid, has been effected. It is square with the platform, the centre of the eastern side being in the axis of the ramp. Each side measures 60 feet. In only one place, the north-western corner, has any of the outer facing been preserved. This is of fine white limestone—like the walls of the court discovered last year; it appears on the right of Fig. 2, which shows the back or western side of the pyramid, with the octagonal pillars of the hall surrounding it, and the Temple of Hatshepsu beyond. It will be noticed that this facing-wall has not the batter or slope of a pyramid. It is evident that the central erection was not a pyramid in the usual sense—it was a small pyramidal erection mounded on a pedestal or base, which was pyloniform, with the usual Egyptian cavetto cornice and the newel or angle-bead at each corner; of this base we have found the core of flint boulders and the remnant of the limestone facing. Such erections were usual over tombs in the Theban necropolis.

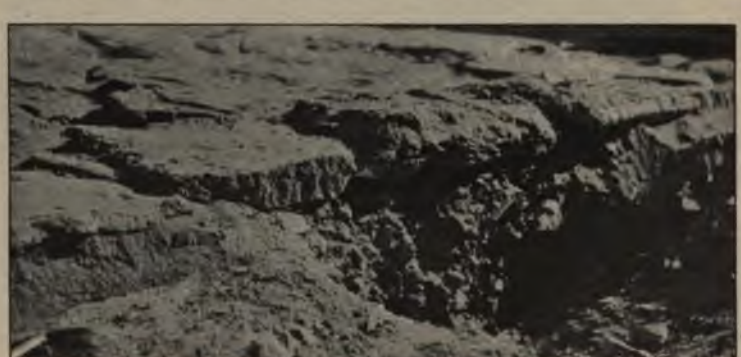


FIG. 3.—THE ROCK-SALT PAVEMENT.

The interior of the pyramid was investigated by Professor Naville after I left, but no trace of a tomb-pit was found, the only thing discovered being a remarkable pavement of what Dr. Schweinfürth pronounces to be a form of rock-salt (Fig. 3). I have in

another place (*Proc. Soc. Bibl. Arch.*, June, 1905) given my reasons for believing that this pyramidal erection does not really conceal the tomb of the king, but is a mere architectural survival in the temple, the real tomb being a rock-cut *bâb* elsewhere, perhaps in the cliffs at the back of the building.* Although the form of pyramid mounted on a pyloniform base is quite usual, the combination of this with a roofed hall or ambulatory of octagonal columns which ran round it and was enclosed by a wall sculptured with reliefs, outside which was an open peristyle or colonnade looking out over a court at a lower level, is quite new in Egyptian architecture, and the effect of the whole must have been very peculiar.

At the back of the pyramid was a row of shrines dedicated to certain priestesses of Hathor who were members of the king's *harim* and were buried in rock-cut shaft-tombs on the platform behind the shrines. The coloured high reliefs of these shrines are of very fine and remarkable work, and have given us a totally new idea of the art of the XI Dynasty. Other tombs of priestesses were found in the open peristyle on the north side of the platform. In each was buried a sacred Hathor-cow as well as the priestess herself. Some very interesting skulls of these cows have been found this year. The bodies of the priestesses were laid in sarcophagi of fine white limestone. The finest of these, the sarcophagus of the Princess Kauit, is an unique work of Egyptian art, and, as the best object found during the excavations, has gone to the Cairo Museum (Fig. 4). An interesting point about them is that some of them were originally let down into the tomb in pieces, which were fitted together in the chamber. Kauit's was hoisted out again in its component pieces. One of these priestesses or princesses, Kemsit by name, was a negress; she is depicted as black on the fragments of her sarcophagus and on a band of fresco which runs round the interior of her tomb-chamber. Her mummy has been brought to England, and the skull appears to be of negroid type. It will be remembered that tomb furniture, consisting of models of granaries and workmen, etc., were found in tombs of the same series excavated last year, and were shown at the annual exhibition of the Egypt Exploration Fund, Gower Street, in July last. The unique model of bakers and brewers at work, which was one of the chief features of that exposition, is now exhibited in the Fourth Egyptian Room of the British Museum, Case 188, No. 40,915. Remains of similar models were also found in the tombs excavated this year, but owing to the demands rightly made upon our transport facilities by the heavy statues and reliefs, of which we were able to bring back a much larger number than last year, it was thought best to leave these and the remains of the sacred cows for the exhibition and distribution of a succeeding year. In

FIG. 4.—SARCOPHAGUS OF KAUIT.

* We may compare the pyramid of Queen Tetashera at Abydos (excavated by Messrs. Mace and Currelly), which was a dummy, the queen having been really buried at Thebes.

the tombs of Kemsit and Kauit were found small wooden model coffins with waxen figures representing the deceased, wrapped in mummy cloth, in them. These are probably an early form of *ushabti*. One is being exhibited this year.

The interesting, and from the anthropological point of view, important discovery of small votive offerings of the XVIII Dynasty, which was made last year (*see* MAN 1904, 43), has not been repeated, only a few stray votives having been found. Evidently the dust-heap of the Hathor shrine is nearly exhausted. A large number of these incense-burners, figures of cows, eye and ear amulets, bronze plaques, scarabs, and bead necklaces, which were dedicated by the fellahin of the XVIII Dynasty to the great goddess Hathor of Deir el-Bahari, and when broken or required to make room for fresh additions were thrown by the sacristans over the wall into a dustheap in the court of the XI Dynasty Temple below, are now temporarily exhibited in the North Gallery (Semitic Room) of the British Museum.

But if we have not found so many anthropologically interesting small objects this year, we have on the other hand found large objects of art which are more important than any of the larger trophies of last year's work. Chief among these objects are six statues of black granite, over life size, representing King Usertsen or Senusret III., of the XII Dynasty (Fig. 5). Four of these have the portrait perfectly preserved. And the interesting thing about these portraits is they represent the king at different periods of his life, from the rounded features of his twenties to the haggard and lined face of an Egyptian past middle age. His face is, as is known from other portraits of him, of the type which used to be called "Hyksos"; the face of Amenemhat III. of the same dynasty, is of the same type. It has usually been supposed that this strongly-marked type is non-Egyptian and of foreign origin, but there seems no particular reason for this theory, the type seems that of any Egyptian fellah. Three of these statues are now being exhibited (July).

FIG. 5.
STATUE OF USERTESEN III.

Other statues were found of Mentuhetep and of Amenhetep I., colossal, in Osiride form, and wearing the hieratic costume of the *sed-heb* festival. Both these monarchs were venerated as tutelary dæmons of the Western Necropolis of Thebes, and were invoked as protectors on the funerary stelæ of the Thebans; on one, found this year by us, we have a representation of these very Deir el-Bahari statues, to which invocations are addressed by the deceased.

Of a later period two small statues of Paser, Governor of Thebes under Rameses II., were found, and a most beautiful alabaster head of a cow about half life-size, whose eyes were originally inlaid with lapis lazuli, while its horns were probably of silver with a golden disk between them. This was no doubt the head of one of the holy images of Hathor, preserved in the speos-shrine of the XVIII Dynasty Temple of Hatshepsu. It is a very fine specimen of the Egyptian sculptor's art.

This sketch will be enough to show how interesting and important the excavations at Deir el-Bahari still continue to be. But excavations, be they as interesting and important as they may, cannot be conducted without money, and it is earnestly to be hoped that those who can will not only subscribe to the ordinary expenses of the Egypt Exploration Fund, but will provide Professor Naville with one or two special and direct gifts, in order to enable him to finish the work this year without fail. That such donations would be given to work which has already produced important scientific

results, and will probably produce more, is evident from a simple recapitulation of the chief discoveries of the two seasons' work, which has been carried out at a total expenditure of only about £1,500, from first to last. These are :—The oldest Theban temple, which is at the same time the best preserved of the older temples of Egypt, and is the only one of the Middle Kingdom of which we know anything as regards plan and construction; some of the finest specimens of ancient Egyptian masonry and wall-building known; sculpture in coloured relief of the XI Dynasty, which has given us entirely new ideas concerning the art of that little-known period; new monuments of kings of the same age; portrait-statues of the greatest king of the XII Dynasty; and authropological material of great interest in the ex-votos of the Hathor shrine.

The exhibition of the statues, reliefs, and other objects found this year was held in the rooms of the Society of Biblical Archæology, 37, Great Russell Street, W.C., during the month of July. H. R. HALL.

Archæology: Eoliths.

Dalton.

Machine-made Eoliths. *By O. M. Dalton, M.A., F.S.A.*

67

The eolithic question appears likely to enter upon a new stage before very long as a result of the researches of M. André Lavilles, of the School of Mines at Paris, Professor M. Boule, M. E. Cartailhac, and Dr. H. Obermaier. On June 22nd last these gentlemen went to Mantes to observe the results of certain operations in a cement factory, intended to remove the flint nodules embedded in the masses of chalk which are treated in the manufacture of cement. They claim that the mechanical process by which the flints are finally separated from the chalk and deposited in a gravel at the bottom of a large receiver results in the production of all the familiar forms of eoliths; and that this being so, the hypothesis of human agency in the case of plateau flints becomes superfluous. The following passage translated from Dr. Obermaier's preliminary account in the *Münchener Allgemeine Zeitung* (*Beilage*, July 23, 1905, p. 157) will explain the manner in which the "eoliths" were mechanically produced by whirling water, similar in its effects to the violent fluviatile action of remote prehistoric times: "By its natural "constitution the local chalk contains numerous unbroken flint nodules, which have to "be removed before it can be used for cement. In order to effect this separation, the "blocks of chalk are placed in a receiver full of water to which a rotatory motion is "communicated. After twenty-nine hours the chalk is completely refined, and the flint "is left deposited on the bottom of the vessel like a bank of gravel. But during the "operation of this artificial whirlpool the nodules have been rolled one over the other "and exposed to every conceivable kind of pressure and shock. At the conclusion of "the process on the day of our visit we found to our astonishment that the great "majority presented examples of all the eolithic forms. The similarity of the different "specimens before us to the prevalent eolithic types was so close that they could not "possibly have been distinguished from actual eoliths."

As a result of these investigations, M. A. Gaudry, in a report to the *Académie des Sciences* of Paris, dated June 26th, states his opinion that eoliths can certainly be produced by mechanical means and as a result of purely natural forces; further that the argument from eoliths to the existence of Tertiary man now falls to the ground. Professor Boule and Dr. Obermaier will shortly publish a full account of the pseudo-eoliths of Mantes, in which their bearing upon the plateau implements will be discussed. This should be of interest to both parties. O. M. DALTON.

REVIEWS.

Philippine Islands. Folkmar.

68 *Album of Philippine Types. Christians and Moros. Eighty plates, representing thirty-seven provinces and islands.* Prepared and published under the auspices of the Philippine Exposition Board. By Daniel Folkmar, D.U., Paris. Manila: Bureau of Public Printing, 1904.

This album contains 160 excellent photographs of eighty men found in Bilibid prison in 1903. Forty-three provincial types are represented, and these are mostly from the tribes officially denominated "Christian." Opposite each photograph are given the measurements of eight or nine dimensions of the individual represented, in parallel columns with average values of the same dimensions obtained from the measurement of fairly large numbers of the same tribe. This work is, therefore, a valuable contribution to the physical anthropology of the Philippine Islands.

An introductory memoir contains some valuable descriptive information about the tribes illustrated in the album. Some of the author's conclusions, however, do not receive much support from the figures given in this work. He says, for example: One of the results of the anthropometrical work done in Bilibid would seem to be a demonstration of the need of this classification. As compared with each other, the northerners are tall and long-headed, the southerners, short and broad-headed. Well, the Tagalogs are a northern tribe and their average cephalic index is 83, an index which is decidedly not indicative of a long-headed race.

The numbers of each tribe whose measurements are given, are unfortunately, in most cases too small to represent any real difference between the various tribes described in this volume. Taking head-lengths, for example, the greatest difference is to be found between the Ilocanos and the Cagayans. The difference between the averages of 15 Cagayans and 193 Ilocanos is (184–178) 6 mm. This difference on calculation will be found to be barely sufficient to demonstrate any real difference between the two extreme members of the tribes represented. The Negritos seem to be quite distinct from the other tribes, by reason of their small average breadth, 144 mm., and their lower cephalic index, 80.

If these types fairly represent the inhabitants of the Philippine Islands, they appear all, with the exception of the Negritos, to belong to the same race, and this race is closely allied to the Malays and Chinese. No doubt more extensive measurements would enable us to detect small differences between different tribes in different parts of the islands. One would expect, however, to find the long-headed people rather in the southern, than in the northern, islands, because the influence of the long-headed inhabitants of New Guinea might be expected to make itself felt in that quarter. These questions cannot, however, be settled by speculation, and it is to be hoped that the American anthropologists will continue to extend the anthropometric work which has been so well begun, if we may judge from the sample presented to us in this album.

J. GRAY.

Pigmentation. Woodruff.

69 *The Effects of Tropical Light on White Men.* By Major Chas. E. Woodruff, M.D., Surgeon, United States Army. London and New York: Rebman, 1905. Pp. 358. 22 × 14 cm. Price 10*s.* 6*d.* net.

The author is to be congratulated on having produced a book which will be read with pleasure and interest alike by anthropologists and physicians, the former finding clearly laid before them the importance of certain features in the environment of the human species, the latter a synopsis of all that is known concerning the action of light

on the organism and its suggested therapeutic applications up to the present time. The more strictly medical chapters are perhaps a little too technical and abbreviated for the lay anthropologist, but the more general chapters and the suggested hygienic rules for those compelled to live and work in the tropics will be fully appreciated by all.

The central argument is that the races of man, like other animals, are distributed in definite zoological zones, boundaries of which are isothermals, and that each race is limited in its extension north and south, though it may extend to any distance east and west within its proper zone. Acclimatisation outside such a zone not being possible migration is accompanied by extinction, or the return of the emigrants to their home. In each such zone man will be found to present special features adapting him for life therein, but features which, if transported to another environment, would be prejudicial instead of beneficial in their action. Thus the author specially points out that among the natives of tropical countries where the air is hot, the nose is very flat and the nostrils open and wide, while in cold and temperate zones the inhabitants have large prominent noses and narrow almost slit-like nostrils with a correspondingly extensive warming surface. Corresponding to these features it has long been known that negroes in cold countries are especially liable to all varieties of pulmonary trouble. Major Woodruff does not suggest an independent origin for each race or variety of the human species, but that the spread from the centre of development was so slow in each direction as to allow variation to occur, those individuals who presented characters best daapted to their environment, being able to survive in the greatest numbers to propagate their species. Tropical light is considered to be enervating, in that by its excessive stimulation it causes those unaccustomed to it to use up their energies too rapidly and then to fail, completely exhausted. Those who have by long generations become accustomed to the condition are not characterised by any great powers or desire for mental or physical exercise. All the great ancient sub-tropical civilisations were built up by men who had migrated, it might be, but a little south of their proper zones, and so were at first stimulated to greater efforts but subsequently perished from want of adaptation to their changed surroundings.

The author concludes that most such civilisations were founded by a blond aristocracy or ruling class because the conditions which, in his opinion, led to the evolution of blondness—"a cold, dark northern and probably a cloudy, rainy and misty, "country are also the exact conditions needed for the evolution of the brain by natural "selection."

The origin of the blond races is traced to the north-western corner of Europe—Scandinavia, Denmark, and the Baltic plains of Germany. Here in the early post-glacial period the blonds originated, and thence a reflux migration has occurred to the maximum limits of their zoological zone. From a comparison of the meteorological charts and those of human colouration Major Woodruff has deduced the law that: The blondness of a European nation is proportional to the cloudiness of its country. In southern countries brunetness and then blackness, or at least deep pigmentation, becomes the rule, and it is to some extent ordinary experience that these blonds who tan most deeply stand best exposure to tropical conditions.

Of great interest is the conclusion arrived at in this book that the blonds have gone out of their zone in the greater part, if not all, of the United States—with the exception, of course, of Alaska—in Australia, and the northern parts of Cape Colony, and that in time they may be expected to die out therein. In the United States the gradual fading out of this type has been noticed, and in Australia the falling off of the birth-rate has recently given rise to some degree of alarm.

The relative increase of brunetness in cities is due, it is suggested, to the relatively greater intensity of the heat and light reflected from wall and pavements in comparison with the countryside.

Whenever the blond has penetrated, even a little, south of his zone it is maintained there are evidences of deterioration, such being most marked in the nervous system. In connection with the Philippines the author quotes numerous regimental statistics to show that blond soldiers suffer more than brunets; these are not quite conclusive, since the differences noted fall within the limits of chance variation between different samples.

The main and more important argument is that a climate which evolved the blackness of the native implies the presence of such a condition as necessary for residence therein.

Major Woodruff's book comprises almost all the known facts as to the influences of residence in different climatic zones and can be warmly commended to the notice of all who are interested in the influences of environment. F. S.

Psychology. **Ward: Rivers.**

The British Journal of Psychology, Vol. I., Part iii., January, 1905. Pp. 191-320. Price 5*s*. net. **70**

Some thirty pages of this part are occupied with a paper by F. N. Hales on the Psycho-genetic Theory of Comparison. Drawing his evidence from the gesture language of deaf-mutes and of primitive peoples as well as from spoken languages, he classifies the methods by which two objects or ideas are compared under the names of (1) opposition and exclusion; (2) separation; (3) apposition; (4) gradation and composition.

The pages of MAN are hardly the place for a criticism of the author's assumptions, methods, and conclusions, but some remarks may be made on his data, which are largely drawn, as might be expected, from the domain of anthropology. Before doing so it may be pointed out that from two classes of facts to which he does not allude material of value might be drawn. In the first place the pictographs of the Amerinds have been studied to an extent sufficient to justify their use by the psychologist. In the second place interesting results might follow from an investigation of the steps by which a new language is acquired either by a child or an adult, the use of grammars being, of course, excluded.

Turning now to the data on which Mr. Hales relies, it is a little surprising to find him complaining of our meagre knowledge of African languages. Many are, it is true, hardly known, but there are some hundreds of text books awaiting his leisure, particularly in the languages of Guinea and the North-West, Abyssinia and the North-East, and the Southern and Eastern Bantu tongues. Even in Australian languages, on which he quotes John Mathew, without, however, mentioning the particular language of which he spoke—the Kabi of Queensland—W. E. Roth (Pitta Pitta), and the less reliable R. H. Matthews (Kamilaroi), his information might readily be made more complete. Teichelmann and Schürmann (p. 7) give him an example which seems to be a case of gradation, Threlkeld (p. 17), *N. Queensland Ethnog. Bulletin*, No. 2, p. 25, with cases of exclusion, apposition, and gradation, and probably other authorities, would be equally prolific. What Mr. Hales means by the statement, on p. 236, that stem-isolating languages yield but ones olitary instance of gradation is not quite clear. In this connection the reduplicative form of the comparative, not uncommon in Australia, is, perhaps worthy of attention.

Mr. Hales's paper is, of course, no more than a prolegomenon, as he himself recognises, and probably the statement on p. 236 just quoted means no more than that he has found only one example. On p. 220 he states that the literature of gesture language is very small. It is true that we have no more than short papers on negro gesture language, and for the Australians nothing more than a few pages by Howitt in his

recent book, and Kempe twenty years ago. But it is surprising that Mr. Hales, who quotes Garrick Mallery's work on sign language in the first report of the Bureau of Ethnology, should have overlooked the same author's treatise in the Tenth Report as well as Clark's *Indian Sign Language*, which, for some reason unknown to me, is not mentioned by Mallery in his second paper. Space forbids me to cite examples from these works, which contain gesture methods not mentioned by Mr. Hales.

I can also do no more than note the further contents of this interesting number, which includes another paper on Genetic and Comparative Psychology, a discussion of various tests on epileptics, an analysis of "Localisation," and a historical essay on Malebranche's "Theory of the Perception of Distance." N. W. THOMAS.

Egypt. **Chantre.**

Recherches anthropologiques en Egypte. Par Ernest Chantre. Lyon : A Rey et Cie., 1904. Pp. xviii × 318. 38 × 26 cm. **71**

During his three visits to Egypt, M. Chantre spent some weeks in the excavation of an early cemetery near Luxor, he examined upwards of a thousand skulls of various ages, and with the help of his wife made valuable measurements upon a like number of living Egyptians, Bedawin, Beja, and Soudanese, male and female. The knowledge thus gained forms the basis of the large quarto memoir which is now published. Many of its pages bear evidence of a serious attempt to arrive at the origin of the Egyptians. Yet in great part the book is rather the handsome product of the *dilettante* enthusiast, describing in charming and easily-read language, facts with which Egyptologists have long been familiar, containing beautiful illustrations of the people and their surroundings, a volume eminently fitted for a place on the drawing-room table.

The chapters of the first part of the book contain accounts of the various epochs in the life-history of Egypt. The second part deals with the modern Copts, Fellahin, Bedawin, and Beja, and with types of the population of the Eastern Sudan, about a hundred of whom were measured by the author at Asswan during service in the Egyptian army.

Stone and metal implements are described and discussed ; pottery is figured ; several pages are devoted to the analysis and evolution of the embalming process and to the relation between mummification and an animistic religion ; there are the familiar portraits of Egyptians and of neighbouring peoples, reproduced from the walls of ancient tombs and temples ; the characters, habits, and beliefs of the modern and ancient Egyptians are described, and there is a lengthy comparison of the character and physique of the Copts and Fellahin of various parts of Egypt with one another, with the ancient population and with neighbouring peoples.

Now can it be conceived that in these days of specialisation any one man is capable of passing authoritative judgments on such diverse problems of Egyptology ? The special interests of the author lie unquestionably in the direction of physical anthropology, and his fascinating description of the character and superstitions of the Egyptians may be regarded perhaps as an attractive frame in which he seeks to set the duller data of anthropometric study. Accordingly, it were idle to expect more than a second-hand knowledge of the various problems on which he pronounces judgment. In archæology Amélineau, de Morgan and Maspéro have been M. Chantre's chief authorities. Thus in his description of the excavations at Abydos and el-Amra (p. 44) he neglects the more recent and careful work of Petrie and Randall-MacIver, and limits himself to mention of his countrymen's labours. He publishes the cranial measurements of M. Fouquet, a Cairo physician, omits any detailed reference to Miss Fawcett's most elaborate work on the Nakada crania and passes over Randall-MacIver's data on the surprising grounds that he has not used the agreed methods of measurement.

It will be news to many Egyptologists that while "iron was known to the "Egyptians almost as soon as bronze" (p. 12), "copper, then bronze, and soon iron "appear to have rapidly supplanted stone in Egypt for domestic use" (p. 13). If Montelius exaggerates actual conditions when he declares the use of iron to have been unknown in Egypt before 1500 B.C., the metal was certainly a rare and costly luxury long before it came into "domestic use," and there is no satisfactory evidence of a "rapid" transition either in Egypt or in Europe from an age of stone to one of iron.

In the chapter on the prehistoric times, M. Chantre concludes that an autochthonous population existed in the quaternary period, but we look in vain for any account of prehistoric human remains. His first account of Egyptian skeletons is contained in the following chapter which opens on a fully blown Memphite age. Even the possibility of a "predynastic" period appears to find no favour with M. Chantre.

The author's study of his valuable anthropometric material is vitiated by his inadequate training in statistical method. Standard deviations are a *terra incognita* for M. Chantre. He gives us interminable averages, calculated, discussed, and compared, but never an attempt to determine whether the difference between two or more averages have an actual significance, or whether it be due to the chances of random sampling. Thus, he asserts that between the XXIst and XXXth Dynasties there is a tendency to brachycephaly, relatively to the preceding period from the XIth to the XXth Dynasties; the cephalic index averaging 74·4 in the skulls of the former period and 72·4 in those of the latter. Yet his own table contains a series of twenty-five Theban mummies between the XIIth and XXth Dynasties, which give an average index of 76·08, and five Theban skulls which give an average index of 77·09. But making no allusion to these exceptions, M. Chantre holds as "highly probable" the view that the alleged brachycephalic tendency during the above period is due to "the introduction of Semites "in increasing numbers, who in Syria are known to be distinctly brachycephalic."

Elsewhere M. Chantre takes the somewhat different view that Egypt has always assimilated the foreigners who have settled on her soil, and that no real difference exists between the ancient and modern Egyptians. But the evidence adduced in favour of this point is not of an uniformly satisfactory character. On page 304 a frequency curve is drawn, comparing 288 modern with 399 ancient skulls. The modern material is derived from very different parts of the country, the ancient not only from very different parts, but also from very different periods. The book is marred by similarly unscientific methods elsewhere.

Page 203 contains the following sentence: "Among the Arabs we have seen that "the majority and the most essential of the physical characters differ little from those "of the Egyptians." Only on the previous page we had been told that "from the "physical standpoint these two peoples present well-marked differences."

M. Chantre's final conclusions is that the Egyptians are autochthonous, and that they, the Berbers and the Beja, had a common origin. If we accept this view we must allow that Egypt is the cradle of the Berber and Beja peoples. M. Chantre very rightly deprecates the comparison of modern Berber with ancient Egyptian pottery and crania in order to discover the relations of these two peoples. But on what evidence may not the Berber and Beja be regarded just as "autochthonous" as the Egyptians?

If M. Chantre has failed, it has been through attempting too much. His book is too elaborate to form a popular memoir, and too diffuse to mark a serious contribution to the advance of Egyptology. However, it is superbly illustrated and full of interesting ceremonial and historical detail for those who propose to visit the country, and it contains fresh physical data which the anthropometrician will unquestionably receive with gratitude.

C. S. M.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

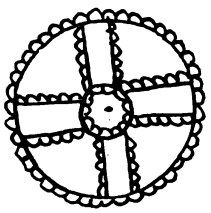


FIG. 1.

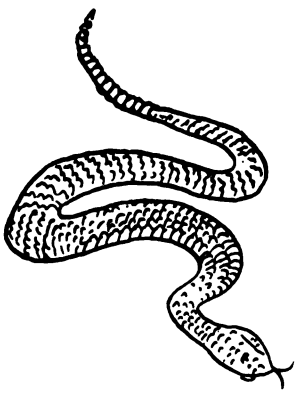


FIG. 2.

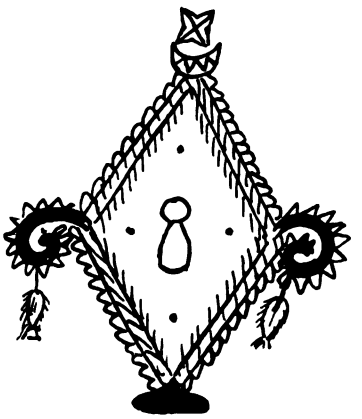


FIG. 3.

FIG. 4.

FIG. 5.

FIG. 6.

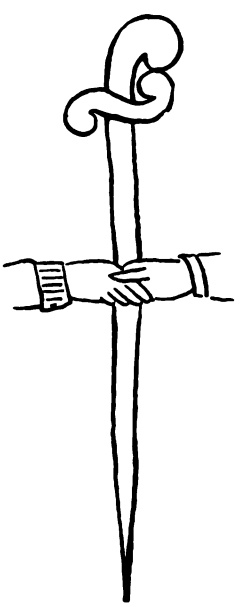


FIG 7.

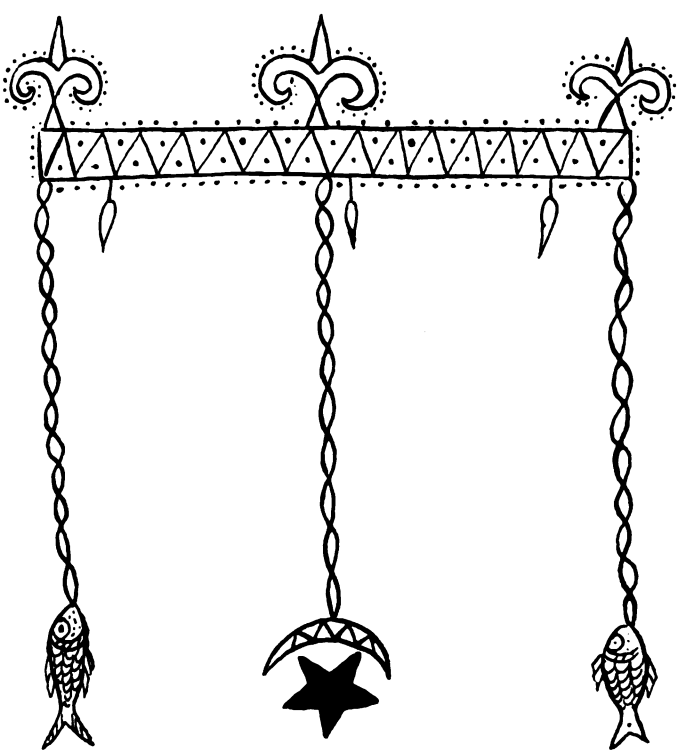


FIG. 8.

TUNISIAN TATU DESIGNS.

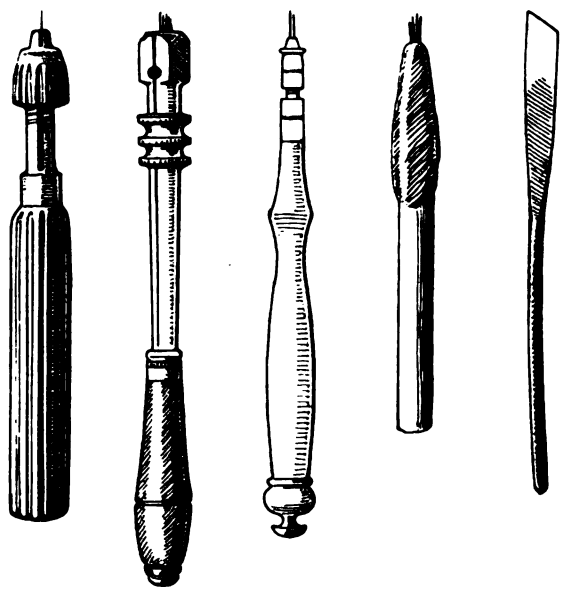
ORIGINAL ARTICLES.

Tunis: Tatu. With Plate I-J. Ling Roth.

Tatu in Tunis. *By H. Ling Roth.*

72

A few years ago, through the kindness of Mr. Arthur V. Lilley, I was enabled to purchase the stock-in-trade of a native professional tatuer of Tunis, who had expressed the desire to give up the work as he had developed qualms of conscience which, as a Mahomedan, troubled him.



FIGS. 9 10 11 12 13

The instruments consisted of four watchmaker's tool-holders (Figs. 9, 10, 11, the fourth being a similar tool to Fig. 11). These are fitted with European needles. He also had a pricker, which consisted of a small cylindrically-shaped piece of wood (Fig. 12) with five needles at one end, fixed in position by means of gum or wax. Also two tools (Fig. 13), which may be described as lancets hammered out of a piece of wire and sharpened at the flattened end. According to the fineness of the lines in the design the operator used one or more needles, and for certain designs not specified the skin was cut with the lancets. The colouring matter was made of lamp-black, alcohol, and gum, and the operation was finished at one sitting. For the simpler patterns the design was lightly marked on the skin or pricked on without any preliminary outline drawing. For elaborate designs, printing blocks crudely incised out of flat pieces of hard wood (Figs. 14–23) were used. The surface of the blocks was blackened, and the imprint being made therefrom, the operator proceeded with the pricking.

If the ink and tools were not good or clean, blood poisoning ensued, but otherwise, after the skin had swelled for a day or two, it usually resumed its normal state plus the pattern.

FIG. 14.

FIG. 15.

FIG. 16.

There seemed to have been no specified period in a person's life when he or she was tatued, but girls might receive additional marks on arriving at puberty.

The object of the tatuing was manifold, but in principle it was expected to act

FIG. 17.

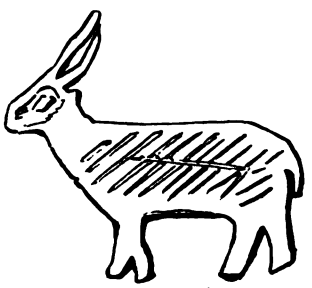


FIG. 18.

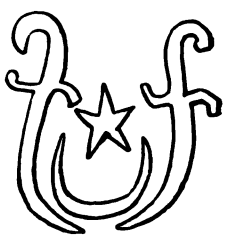


FIG. 19.

as a charm. The design illustrated in Fig. 6 is found one on each cheek, one on the centre of the forehead, and one on the chin to give beauty to the bearer, and is evidently a corrupt form of Westermarck's hand emblem. The design, Fig. 1, was put on the joints to relieve rheumatic pains. Fig. 2 : a serpent, appropriately a charm

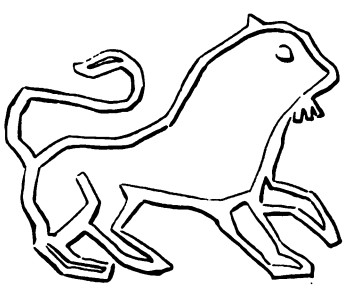


FIG. 20.

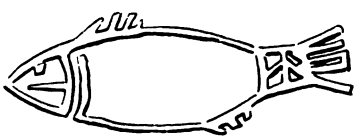


FIG. 21.

FIG. 22.

against snake bite. Fig. 3 : a lock plate, three of which were tatued on the chest to give health to the lungs. Fig. 4 : This star is often found on the temples to

FIG. 23.

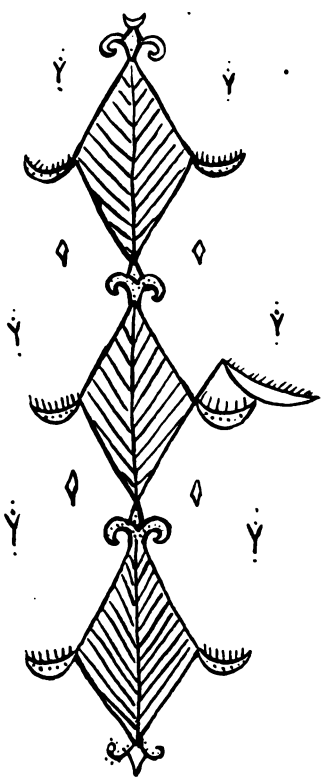


FIG. 24.

strengthen or heal the eyes. Fig. 24 : tatued on the outside of the lower part of the leg from the ankle upwards to give strength. Fig. 7 : a sign of swearing eternal friendship, evidently an introduced form. Fig. 5 : generally tatued on soldiers' arms

to give them courage. Fig. 8 : a design tatued on the back of the wrist, the chains hanging down the hand ; supposed to give strength, the fish being a sign of good luck. Figs. 25 and 26 are copied out of the professional tatuer's book of designs, which is an old French cash column memorandum book (*cahier*), 8 in. × 6¼ in. (20 cm. × 15 cm.). The designs in this book cover a wide area, nothing appearing to come amiss, as, for instance, the illustration, Fig. 16, which is copied from the trade mark of a Lyons silk manufacturer. There are also sketches of a lamp-post, guns, bicycles, several women, mostly indecent (under European influence), a steam engine, fishes, roses, birds, horsemen, &c. Against some of these illustrations a price is placed, evidently the cost of tatuing that particular design ; thus Fig. 24 costs three francs. Fig. 26 is probably a charm against the evil eye. There is in the designs a great mixture of native and low-class European ideas, and altogether the art as carried out by this professional tatuer was in a low state.

FIG. 25.

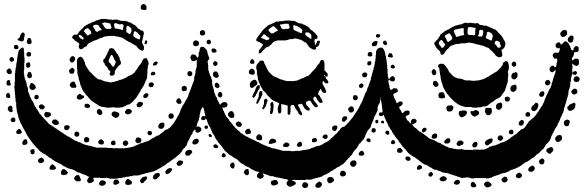


FIG. 26.

HY. LING ROTH.

Sinai. **Thompson.**

Note on the Antiquities of Sinai. *By R. Campbell Thompson, M.A.*

73

In his article in the August number of MAN on the Sinaitic temple, Professor Petrie brings forward some criticisms of my remarks in the June number :—

(1.) Professor Petrie corrects my spelling "Sarâbit el-Khadm" to "Serabît el Khādem." The Arabic form, according to Palmer, is given in the Ordnance Survey, Part I., p. 290, as Sarábíṭ el Khádim, both second and third syllables being accented. Professor Petrie himself is inconsistent, as in his letter to the *Times* of May 23 he spells it "Sarabit el Khadem."

(2.) I mentioned the plans and work which had been done at the temple before my visit, because I thought that the elaborate work of the Ordnance Survey, both topographical and archæological, as well as the careful observations of Lepsius and Bénédite, were worthy of a fuller description than that given in Professor Petrie's letter that "no visitors to this temple had stayed more than a day or two, and scarcely any digging "had been done in the ruins."

(3.) The next objection that Professor Petrie raises is that "the steles in the shrine "court are not 'much older than the rest,' the earliest steles being the long series in "the XII dynasty approach to the temple," but he has not quoted me correctly. What I said was "are for the most part much older than the rest, dating as they do to the "XII dynasty." On M. Bénédite's plan (published in Maspero's *Histoire Ancienne*, Vol. I., p. 474) the shrine court is shown to contain ten stelæ, all of this date, while the long series in the XII dynasty approach, according to the same authority, contains only eight of the XII dynasty. The other stelæ are of much later date.

(4.) Professor Petrie objects to my description of the temple as "merely a little

" provincial Egyptian shrine." I think it will be admitted, however, that " provincial " is quite a fitting term to be applied to Sinai, and if a comparison be made with the size of the temples at Abydos, Dendera, Edfu, Thebes, &c., " little " is the proper description for a building only 250 feet long and very narrow.

(5.) Professor Petrie says that " the numerous Bethel stones in the neighbourhood " are some of them inscribed by Egyptians, who adopted the local worship. No such " system of stone records of visits are (*sic*) known in Egypt, no one familiar with " Egyptian works could write that they ' are ordinary Egyptian monumental tablets " of Egyptian type.' " With regard to records of miners' visits, I think a fair comparison may be made with the inscriptions of Wadi Hammamat. Kings and governors constantly recorded their visits to various places on neighbouring rocks, &c., as at Konosso, Sehel, and elsewhere in Nubia, at the Nahr el-Kelb in Syria, &c. As to the stelæ, inscribed and uninscribed, I must still adhere to my view that they are ordinary Egyptian stelæ, and I think the XII dynasty stelæ exhibited in the British Museum will confirm the opinion of anyone interested.

(6.) Professor Petrie says, " more strange is it to read of the Babylonian temples, " which were founded by Sumerians, as being Semitic." When it is remembered that the Semites had begun to obtain a foothold in Babylonia as far back as 3800 B.C., and for several hundreds of years before the fall of Babylon held entire sway over the land, direct Sumerian influence having long disappeared, and when we consider that the Assyrian and Semitic Babylonian rulers, particularly during the later periods, extensively restored and rebuilt the old temples, we see that " Semitic " is the only word which properly describes them. From the fact that Professor Petrie no longer repeats his claim that the Sinaitic temple is the only Semitic temple preserved to us, I infer he tacitly admits the Semitic origin of the temples of Assyria proper which I mentioned.

As regards the challenge that I should state what points of distinctively Semitic rites can be traced in Babylonian temples, I must refer Professor Petrie to the long chapter in Jastrow's *Religion* on the Temples and the Cult (pp. 612–689), where he will find much interesting matter on the point.

(7.) As regards the slag heaps and the bed of ashes, Lepsius was my authority for the existence of this slag (*Letters from Egypt*, p. 348). He thought he saw slag there, and measured the heaps, and thought they were remains of the smelting, as I quoted in my article.* But, even if we concede that there is no slag within six miles, Professor Petrie, in his letter to the *Times*, admits that smelters formed part of the ancient expeditions to the temple, and it certainly is a significant fact that no bones at all were found in the ashes. After all, even supposing that no copper smelting or casting went on, there are a good many uses to which fire may be put besides sacrifice, when there are from fifty to one hundred men living near.

(8.) As regards Professor Petrie's objection to the description given under my photograph of the mines, I think I need say no more than that it was taken from the mined slope of Wadi Maghâra, not far from one of the tunnels.

Finally, in the main body of his article Professor Petrie bases his theory that the temple gives an insight into early Semitic worship on three points: (1) the existence of tanks and basins in the temple, proving " how important the ceremonial of ablution " was in the worship here "; (2) the bed of ashes (without bones), proving the existence of a system of burnt offerings; (3) " the Bethel system, of oracular dreams and memorial " stones, as in the story of Jacob," and the so-called pilgrim chambers.

* On this point compare Baedeker's *Guide to Palestine and Syria* (1904), p. 182: " Auf der " Hochfläche standen Schmelzöfen und das Heiligtum, in welchem sich die knappschaft bei ihren " Festen versammelte."

With regard to (1), when it is considered that no well has been found in the temple, and, as Professor Petrie justly remarks in his letter, the plateau "is beyond the reach of "camel transport for water," we may presume that "ceremonial ablutions" is not the easiest explanation for the existence of water-tanks in a building that was doubtless as much a place of defence as of worship, as its name, "the heights of the fortress," implies. Any comparison between the *hanafiyeh* court of Moslem mosques and the courts of this temple must necessarily be precarious, when the composite and borrowed character of Mohammedan buildings (at least 2,000 years later than this temple) is remembered.

With the second point I have already dealt. With regard to the third I do not see how pillars, whether natural or wrought, can be referred especially to an ancient Semitic origin, when nothing in the inscriptions or workmanship has been adduced in proof of this Semitic origin. As regards the pilgrim cubicles, they can as well be explained as dwellings for the 50 to 100 Egyptians, who we know went there, as for the pilgrims of whom we have no knowledge. R. CAMPBELL THOMPSON.

England: Archæology. Windle.

An Excavation in Kemerton Camp, Bredon Hill. *By Bertram C. A. Windle, D.Sc., F.R.S., F.S.A.* **74**

Bredon Hill, partly in Worcestershire and partly in Gloucestershire, possesses two earthworks: a smaller, known as Conderton Camp, and a larger, Kemerton Camp—the subject of this note. This camp is entirely in Gloucestershire; in fact, a part of its circumference forms the boundary of a promontory of that county which projects into Worcestershire. As will be seen from the plan (Fig. 1), this camp belongs to the group

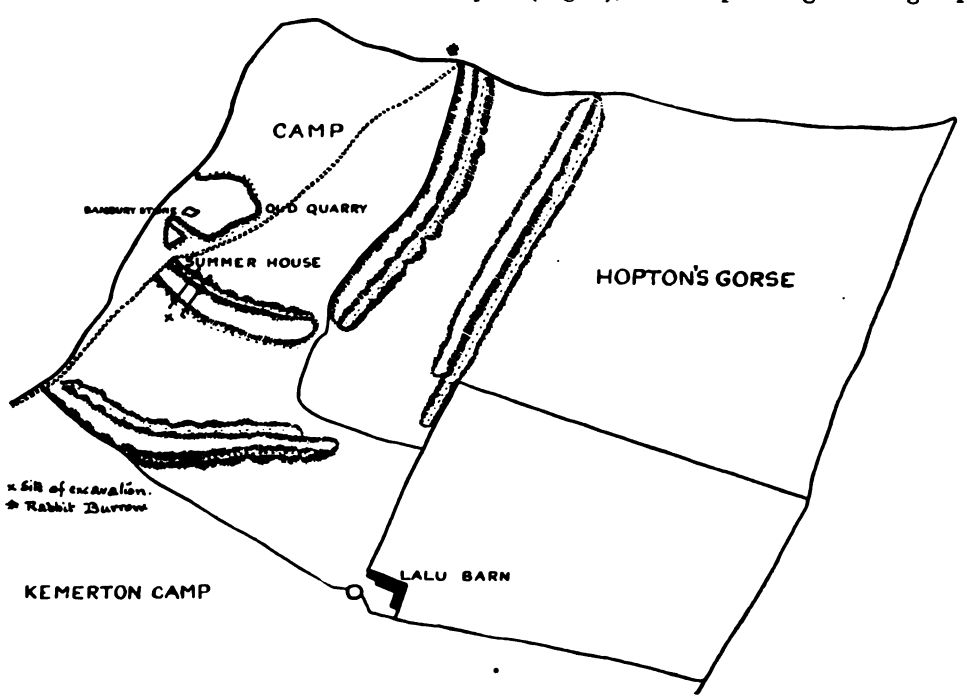
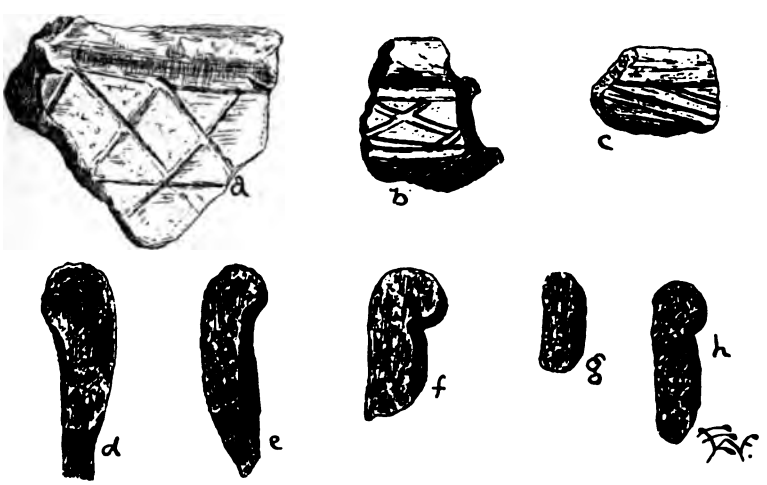


FIG. 1.—PLAN OF CAMP.

of promontory forts, since there are no artificial earthworks to the north and west where the escarpment of the hill is exceedingly steep. The camp contains, in a deep hollow to its south-west corner, a large mass of oolite, known as the Bambury Stone, concerning which many ingenious theories have been spun. It does not seem to be possible

to say whether the hollow in which this stone rests is natural or artificial. There are two ramparts, and a very unusually large extent of ground intervenes between them. This fact, coupled with a story that Roman pottery and coins had been found in the inner rampart near the "Summer House," as they have undoubtedly been found on other parts of the hill, led me to suggest the theory that the outer rampart might have been of earlier date than the inner, and that in this camp we might have an example of the class of camp in which—as at Hod Hill in Dorsetshire—a smaller part had been cut off in Roman times by an inner fosse and vallum. The excavation, however, lends no support to this view.

The camp having recently come into the possession of R. Biddulph Martin, Esq., M.P., of Overbury Court, the excavation was conducted at his request and expense and under my supervision during the autumn of last year, Mr. Henry Balfour being also present during part of the time. As the time at my disposal was somewhat limited, I decided to cut a section through the inner fosse and vallum near the "Summer House," a building of some century's standing, which forms a very prominent landmark at the south-west corner of the inner rampart. Accordingly we drove an eight-foot trench through the rampart, and excavated the vallum down to the virgin soil for the same width. The earth thrown up was carefully examined, and the exact spot where each object was found was carefully recorded, so that it could have been plotted out on a plan. As a matter of fact, however, the nature of the finds was so uniform that there was nothing to be learnt from their relative positions in the excavation. After this excavation had been completed a small amount of digging was done at the point marked with a star at the north-east end of the inner rampart. This digging was made at a rabbit-burrow, in the earth thrown up from which had been found fragments of rough pottery and grains of blackened corn. In Allies' *Antiquities of Worcestershire* there is an account of a landslip which took place at some point—undeterminable apparently at the present day—in the immediate neighbourhood of the camp. A Miss Martin, of Overbury, who happened to be riding over the spot at the time, nearly lost her life. However, the interesting point in the present connection is that, as an observer quoted by Allies says, "as the chasm"—which, by the way, is stated to have been 30 feet wide at the surface and about 40 feet deep—"opened it exposed to view a vein of "black earth about four or five inches thick, immediately under the soil, which in some "places was not more than six inches deep, but varied to eighteen inches or two feet; "that the black earth was supposed to be decayed wheat, as quantities of perfect grains "were found in it." Except that further grains of blackened corn were found in this excavation, the bones and fragments of pottery there discovered did not in any way



a, *b*, *c*. Fragments showing ornament. *d*–*h*. Fragments of rims in profile.

FIG. 2.—POTTERY FRAGMENTS.

differ in character from those found in the section to the south, and the objects from the two spots may therefore be described together.

(i.) The pottery—of which many fragments were found, most of them being very small—*a* in Fig. 2 was quite the largest piece—was all of the rough, hand-made variety, more or less well burnt. The greater part of the fragments bore no ornamentation, but three or four bits did, and three of these are represented in Fig. 2. Another fragment, which bore finger-nail ornamentation, went to pieces, as other portions from the deeper parts of the fosse did, on account of disintegration produced by damp. Profile views of the fragments of rims which we came across are also given in Fig. 2.

(ii.) Bones and teeth of a variety of animals were found in both excavations, and, like the pottery, at all depths. The bones and teeth identified belonged to the horse, ox, goat, pig, deer, and hare. A number of the long bones had been artificially split for the sake of the contained marrow. None of them bore any signs of fire, but fragments of charcoal were found in different parts of the excavation.

(iii.) A number of round pebbles, of a character belonging to the lower but not to the upper slopes of the hill, were also found. These may possibly have been sling-stones—at any rate they must have been brought to the top of the hill at some early date since they do not naturally occur there.

One further point very much impressed itself upon us in the course of our excavation. The depth from the top of the vallum, at the point where the excavation was made, to the bottom of the unexcavated fosse, was 19 feet 6 inches. It was a little difficult, from the nature of the soil—if soil it could be called—to say when virgin ground had been reached, but one could certainly add 3 feet 6 inches to 4 feet for accumulated deposit in the fosse. Suppose half of this to belong to the top of the vallum and the original depth from top to summit would be about 25 feet. Now the material of which the vallum was constructed, as above hinted, could hardly be described as earth or soil. It was, in fact, a mass of fragments of oolite with some admixture of smaller material, which might be described as earth. Before, therefore, turf had grown upon its surface, this must have presented all the appearances of an artificial scree and all the difficulties to the climber which such a conformation affords.

The main point which one learnt was that the task of ascending such a rampart, even without any enemy at the top, would be infinitely greater than could be imagined by any person only looking at the now grass-clad slope.

BERTRAM C. A. WINDLE.

Africa: Kwilu. **Torday.**

Notes on the Natives of the Kwilu, Congo Free State. *By E. Torday, Local Correspondent of the Anthropological Institute.* **75**

The principal inhabitants of the Kwilu are: Bayanzi, Bahuana (Bahoni), and Bambala. These peoples speak amongst themselves a bastard *Kikongo*, which bears a considerable resemblance to Swahili, or rather to *Kingwana*, the corrupt Swahili of the Congo. In spite of this resemblance, however, certain remarkable differences exist between the three dialects spoken by the above-named peoples, and that, too, in the most elementary words; for it is more natural that the names of utensils and certain verbs should have been borrowed from *Kikongo* than words expressing number and relationship. *Kikongo* must be considered a hybrid speech, which has grown up from the intercourse between tribe and tribe. Thus we find that the term for "iron" in the three dialects mentioned above is very similar—Ndoni (*Bayanzi*), Dondu (*Bambala*), N'don (*Bahuana*); but the terms for "stone," which would naturally be older, are quite different, viz., Eyiri (*Bayanzi*), Amani (*Bambala*), and Matarr (*Bahuana*). "Bow," again, is similar—Ota, Uda, and Buta; but the words for "star" are similar

only among the *Bambala* and *Bahuana*, Apededi, and Bamwetede; the Bayanzi use the term M'Biel. More surprising is the difference existing in dialects spoken by different villages of the same tribe. Below, for example, I give a few words used in Luano and Lundu, two villages situated only a score of miles apart, the inhabitants of which claim positively to belong to the same tribe, the Bahuana.

I will first detail the methods of counting on the fingers practised by the Bayanzi and Bahuana :—

BAYANZI

BAMBALA

BAHUANA

FIG. 1.—MANNER OF FILING THE TEETH, KWILU RIVER, CONGO FREE STATE.

Bayanzi.

1. L. hand open, 4th finger flexed; R. hand closed except 4th finger, which rests on 4th finger of L. hand.
2. L. hand open, 1st and 4th fingers flexed, former held in position by thumb.
3. L. hand 3rd finger open, 1st and 2nd fingers flexed and held by thumb.
4. L. hand thumb open.
5. L. hand closed; R. hand 1st finger on thumb.
6. L. hand closed; R. hand open, except 2nd finger, which is flexed and held by thumb.

Bahuana.

1. L. hand thumb open.
2. L. hand thumb and forefinger open.
3. L. hand, 1st, 2nd, and 3rd fingers open.
4. L. hand, 1st, 2nd, 3rd fingers, and thumb open.
5. L. hand open.
6. L. hand, and thumb of R. hand open.
7. L. hand open, thumb held by thumb and 1st finger of R. hand, the other fingers flexed.
8. L. hand open, R. hand as in 7, but 2nd finger open also.
9. L. hand open, R. hand as in 8, but 3rd finger open also.
10. Both hands open, palm resting against palm.

English.	Bayanzi.	Bambala.	Bahuana (Bahoni).	
			Lundu.	Luano.
One	m'bei	mosh	moss	momo
Two	m'bue	mbali	zole	bili
Three	atala	satu	tatu	matutu
Four	ano	gwana	ia	wanna
Five	atien	tanu	tanu	watan
Six	ashom	sambanu	sambanu	wasianna
Seven	tzamwan	samboeli	tsamwar	n'tsema
Eight	nan	kinana	nana	nan
Nine	v'va	libwoa	voa	uwa
Ten	kwim	gumi	kwim	kum
Eleven	kwimbei	gumi na mush	kwim na moss	kum na nomo
Twelve	kwim na bue	gumi na mbali	kwim na zole	kum na bili
Twenty	makum bue	mogumali	makumole	——
Father	atar	da	tat	ta
Mother	moa	ma	mam	ma

English.	Bayanzi.	Bambala.	Bahuana (Bahoni).	
			Lundu.	Luano.
Brother	iyam	iya	iyei	iya
Sister	mokaram	pangim	pangim	—
Father's sister	*moa chicheri	kakem	—	—
Father's brother	lame	n'gwass	†tat	—
Mother's brother	nga	n'gwass	n'gwass	—
Mother's sister	*moa chicheri	*ma gazigazigi	kaka	—
Niece	mabiema	ya	yaya	iya
Nephew	mabiema	ya	yaya	iya
Grandfather	m'bai	tate kalenge	tat, or tat na tat	—
Sun	‡tong	dangu	tang	—
Sky	onoye	yulu	zulu	ngi
No	logami	n'ge-n'ge	lo	lo
Small	chicheri	gazigazigi	atchichi	moshut
Big	onen	monene	yamonene	monene
Good	lonkoro	pimbi	wapim	m'pim
Bad	obi	pimbolo	pimlo	—
Earth	m'men	man	matoto	man
Moon	n'gon	gonde	n'gon	gond
Star	m'biel	ampededi	bamwetede	m'bir
Fire	m'buri	tsua	mba	—
River	n'kwak	gwak	kwak	—
Water	anza	mem	mass	madya
Village	boa	m'bu	matt	bodla
Man	bar	mutu	mut	—
Men	bar	batu	bat	—
Goat	n'taba	komb	kom	tab
Pig	n'gul	n'gulu	n'gul	—
Dog	m'boa	m'boa	m'boa	—
Banana	n'dom	makondo diz	makon	monko
Iron	n'dony	dondu	n'don	—
Copper	m'mia	minengwa	milun	—
Stone	eyiri	amani	matarr	mankul
Bow	ota	uda	buta	boata
Arrow	atom	itutwi	bitut	—
Tree	onti	mitondo	miti	—
Wood	inshia	ndo	kun	—
Beard	keletch	§gileff	§gileff	kelel
Hair	n'tchi	dub	bonzo	m'fuss
Eye	mish	mess	mess	matshi
Nose	mbom	mozulu	m'bum	—

* *ch* as in *ch*icken; moa chicheri = small mother.

† To distinguish between *father* and *uncle* they say "father who begot me" and "small father."

‡ Pronounced like French *long*.

§ *g* hard as in *girl*.

English.	Bayanzi.	Bambala	Bahuana (Bahoni).	
			Lundu.	Luano.
Mouth	mun	gan	*pikop	—
Teeth	madj	mass	men	—
Hand	kekandje	n'dembo	kikansi	kikes
Leg	kul	gul	kul (upper half) / mokom (lower half)	—
Foot	kekanch	kigazu	kikanze	makul
To come	tche	zza	zza	iya
To go	yaya	dagwe	n'da	kwe
To eat	biedya	kulya	dia	yakledja
To drink	kunya	kunya	n'nua	noadya
Hunger	n'djal	n'dzala	n'dzala	—
To hit	kubul	kubula	kubet	kutscha
To kill	kukwa	gufoa	fa	kupfa
To break	kobol	kobogole	kobogol	—
To see	kommon	gutala	kumon	—
Woman	mokan	mokosuni	baket	mokat
To work	kikiri	kusal	kussal	assal
To wash	makawob	gof	kukwal	eul
To speak	kubal	kohossa	kufun	amo
White	m'pio	pemb	pez	mpes
Black	wapiri	ubumbele	kuhit	bondun
Pretty	kobong	pim	pim	m'pipi
Finger	kekange	dembu	milem	molim
True	kibiri	kikiri	kwakirik	n'djim
Shadow	—	—	kizwiz	—
I	men	—	n in	—
Thou	n'ji	—	n'ge	—
He	n'gi	—	yan	—
We	bin	—	ben	—
You	bin	—	bet	—
They	n'gi	—	yan	—

* This is the general term ; pikop-monwa = the whole mouth ; pikop = the under lip ; moniva = the tongue.

E. TORDAY.

Obituary : Adolf Bastian.

Tylor.

Professor Adolf Bastian: born June 26, 1826; died February 3, 1905. 76

I had intended to write for the Anthropological Institute a short account of the life and works of my honoured friend, Professor Bastian, of Berlin, who died last February at Port of Spain. But illness intervened which made it impossible for me to carry out this intention. In the meantime a fellow anthropologist, like myself a student of Bastian's voluminous writings, placed in my hands a summary account of what he had drawn up of the great anthropologist's travels and of his published writings, which, I may remark, occupy between two and three feet on my bookshelves, and run toward 10,000 pages, not counting his articles in the *Zeitschrift für Ethnologie*. Students

engaged in serious anthropological work, especially on the culture side, will find much to profit by in Bastian's volumes, and in the not easy task of consulting them will be helped by my friend's account which is here reproduced. The want of references is, of course, a serious drawback, but my own experience is that Bastian's statements are apt to be confirmed by further enquiry.

Fortunately I possess a photograph of Bastian, which shows him somewhat earlier in life than the picture in the *Zeitschrift*. From this photograph the present engraving is taken.

EDWARD B. TYLOR.

NOTES ON THE LIFE AND WRITINGS OF BASTIAN.

Adolf Bastian was born in Bremen on June 26th, 1826. His father belonged to a well-known merchant family, and to him probably is due the strong business instinct and the gift of organisation which characterised his son as well as the opportunities for acquaintance with visitors from the ends of the earth, and later on the impulse to travel and the first facilities for it. Young Bastian's education was wide and thorough. He passed through no less than five universities, studying law at Heidelberg and biological subjects at Berlin, at Jena, and then at Wurzburg, where Rudolf Virchow had just begun to lecture, taking finally a doctor's degree in medicine at Prague in 1850. In the next year he began his active life. He took a post as ship's doctor for a voyage to Australia, and thus inaugurated a series of voyages of research which covered in all some five and twenty years and ended only with his death. His journeys brought him into almost every region of the habitable world, and though carried out with the minimum of outward preparation they were all conceived with a single definite object in view—the collection of materials for a comparative psychology, on the principles of a natural science.

His first journey lasted eight years, from 1851-9, and led him first to Australia and the Pacific; then to Peru, Mexico, and the West Indies; then back to China, Malaysia, and India, and then by way of West Africa homeward. Only a fragment of his experiences on this journey was ever formally published, namely, *Ein Besuch in San Salvador* (the little-known capital of the negro kingdom of the Congo), and even here the record of actual travel was subordinate in his mind to the illustration of his general view, for the book bears the sub-title *Ein Beitrag zur Mythologie und Psychologie*. In the next year, however, appeared his principal essay, *Der Mensch in der Geschichte; zur Begründung einer Psychologischen Weltanschauung* (Leipzig, 1860), in three substantial volumes, entitled respectively, *I. Die Psychologie als Naturwissenschaft; II. Psychologie und Mythologie; III. Politische Psychologie;* all full of original observations of many peoples, and of the fruits of a reading which was already incredibly wide.

In 1861 he was in Indo-China again, on a four years' journey which covered Malaysia, the Philippines, and Japan, and brought him home by North China, Central Asia, and the Caucasus, laden with the materials for six massive volumes, *Die Völker des Östlichen Asiens*, which dealt more particularly with Buddhism, and with the cultures of Burma and Siam, and were not completely published till 1868.

There follows here an interval of eight years, 1865 to 1873, during which Bastian's energies were mainly directed to the organisation of Ethnological studies in Germany.

Soon after his return he was appointed to an assistant-directorship in the Royal Museums at Berlin, where he found the Ethnological collections confined to two galleries and a very inadequate work-room, but his enormous powers of work and his genius for amassing material and recruiting assistance soon made a change, and the eventual transference of the whole department to an independent *Museum für Völkerkunde* in 1886 was literally Bastian's achievement.

Meantime, though engaged in constant literary work, explaining and defending his psychological theories in detail, he found time for much solid assistance to the Berlin Geographical Society, of which he became, eventually, President from 1871 to 1873. And the second of his great services to Ethnology arise directly out of this phase of his activity.

The first suggestion of an Ethnological Society in Berlin had come from the geographer, Karl Ritter, and in Paris and London such organisations had already been started in 1859 and 1843 respectively, but it was not till 1868 that any practical step was taken in Germany. The first suggestion was merely for an Ethnological department of the Berlin Geographical Society, but Bastian stood out for an independent organisation, and his foresight was soon justified. Virchow, on the anatomical side, lent him his powerful support; the archæologists felt no less the need of a centre for the new prehistoric studies, and the threefold coalition took shape in the *Gesellschaft für Anthropologie, Ethnologie und Urgeschichte*, which was formally inaugurated on 17th November 1869, with Virchow at its head, and Bastian and Braun as his vice-presidents.

To 1868 also belongs the foundation of the world-famed *Zeitschrift für Ethnologie*, which was started and edited as a private venture by Bastian and R. Hartmann nearly two years before; by Bastian's influence it became the regular organ of the Anthropological Society. The full title of its original issue expresses well the motives of Bastian's work at this time, it runs thus:—*Zeitschrift für Ethnologie und ihre Hilfswissenschaften, als Lehre vom Menschen in seinen Beziehungen zur Natur und Geschichte.*

His presidency of the Berlin Geographical Society 1871–3 was chiefly marked by his establishment of the German African Society, and by the organisation of the Loango expedition of 1873, the object of which was to carry further Bastian's preliminary reconnaissance at San Salvador, and to effect an entry into the Dark Continent by way of the west coast, which had hitherto been almost wholly avoided by European explorers. The Loango expedition itself was a failure; the means collected were inadequate, and the local difficulties were peculiar and insurmountable; and it was not till 1877 that the penetration of Africa was accomplished, and then it was by Stanley, and from a base on the East coast.

But Bastian was not in the strict sense a geographer. Neither the difficulties nor the results of travel as such had had the smallest interest for him; and it was difficult to make him speak of his adventures; he published practically no description of the countries which he traversed, any more than of the individuals whom he met there; he concerned himself with none of the problems of structure, configuration, or climate, or of the distribution of living forms, which confront the ordinary explorer. Yet his wide and true perspective of the geographical conditions, and his enormous experience of remote and unfrequented lands, made him an invaluable ally of the German geographical school; and his doctrine of "Geographical Provinces," though not wholly his own, had considerable influence in the development of recent opinion on the matter.

Bastian took no official part in the Loango expedition; but he went out with it, and received its collections in the Museum of Ethnology, of which he was by this time director. And his fourth journey, in 1875–6, was planned, like all its successors, with the direct object of increasing the collections of this museum, as well as of furnishing

material for further books on the "customs and beliefs of distant peoples." The fourth journey took him to the West Indies, and to South and Central America, and its main results were published in 1878 under the title *Die Kultur Länder der alten Amerika*; and the fifth (1878–80) traversed Southern Asia from Persia to Assam and Indo-China, and led on once more to Malaysia, Australia, New Zealand, and across the Pacific again to California and Yucatan. Its principal outcome was a vast work on the *Religious Myths of the Polynesians*, which appeared in 1881.

Then, for some eight years, administrative work in connection with the new *Museum für Völkerkunde* occupied most of his time; but the museum was formally opened in December 1886, and in a year or two more he was free to go off again, this time (1889–91) through Turkestan to India and East Africa, with special enquiry into Jainism and Buddhism; and so again in 1896–8 to look for early Hindu remains in Java, and as far east as Bali; and again to Ceylon, for further Buddhist study, in 1901–3. Finally in 1903, at the age of seventy-seven, he set out once more, first to his beloved Malaysia, then on to study the earlier history of Jamaica, in caves and shell-mounds, and so to Trinidad and Venezuela, till he died, almost unattended, after a brief illness, at Port of Spain in Trinidad, on February 3, of the present year. For him it seemed, as to that older voyager of Bremen, *Navigare necesse est; vivere non necesse est.*

Bastian's service to anthropology was, in brief, two-fold. His world-wide travels, and his incessant activity as a collector, have their monument in the vast treasures of the great museum which he created, and his great ability as an organiser, in the well-planned building which they fill. But his work in the field—immense as were the results—attained this extent in space only at the expense—not indeed of thoroughness within his self-imposed limitations—but of width and proportion of interest. The geographical environment, and the physical characteristics of the peoples whom he had been observing are usually simply passed over; and even in those departments of descriptive ethnography on which his attention was concentrated, the peculiar standpoint from which he viewed his own studies, the extraordinary rapidity with which he was wont to throw his material into shape for publication, and his habit of piling together original and borrowed information with only the slightest indication of the sources in each case, made his writings peculiarly difficult to use, and in later years almost unreadable.

Nor was he strictly an ethnographer. He had neither the width of interest, nor the orderliness of mind which carries out a detailed exploration within fixed limits, or classifies and arranges a collection of ethnographical material. He had no care for technology or even for art—which is more surprising—except in so far as its manifestations expressed racial or national character; and even in the phases of thought, which would seem most akin to his special interest, there is a stern intolerance of sentiment and of all the softer side of life, which makes all the more wonderful his real gift of entering into the thoughts and feelings of simple undisciplined minds. But he had the clearest conception of what he wanted in the way of materials, unending perseverance in collecting it, and a strong sense of the imperative need for collecting it now before the march of European culture extinguished it at its source; and he had a peculiar personal gift of inspiring workers and collaborators, of enticing private collections within the walls of his museum, and of finding out in each locality the people who knew and of eliciting from them their information. And this latter gift most happily was not limited to his intercourse with Europeans: a large part of his book on Polynesian mythology came to him straight from the lips of the natives themselves, and the groundwork of his *Peoples of Eastern Asia* was the lessons in Buddhism which he received from a native priest during an involuntary detention in Mandalay.

Bastian's other contribution to anthropology is in the domain of ideas. The conception of a *Völkerpsychologie*—of a science, that is, which studies the phenomena of the

corporate social life of peoples, as ordinary psychology studies the mental phenomena of individuals, and has, of course, its place far back in the philosophy of the Greek world, and in modern times had been reformulated for example by Herbart as early as 1815. More than this, Theodor Waitz, though only five years senior to Bastian, had already published his preliminary *Lehrbuch der Psychologie als Naturwissenschaft* in 1849, a year before Bastian took his doctor's degree at Prague. That Bastian was directly indebted to Waitz for his conception of anthropological psychology is not easily proved, but the ideas of Waitz and his school were "in the air" at the moment of Bastian's first departure from Europe; they were copiously discussed in Germany during the years of his first journey, and on his return in 1859 he would find the first volume of Waitz's *Anthropologie der Natur-völker* on the point of publication, and Steinthal and Lazarus editing the first volume of the *Zeitschrift für Völkerpsychologie und Sprachwissenschaft.*

An introspective and deductive "psychology of the individual," or even its modern inductive and experimental counterpart, explains the mechanism by which experiences are collected and combined; but it does not explain why either the experiences or the conceptions and ideas which supervene are of the kind that we find to be normal among mankind; nor does it take adequate account of the circumstance that man is practically not found in an isolated condition. As Aristotle observed long ago, he is a "social animal," and a large part of his ways of looking at the world, and of his responses to the impressions which the world makes on him are determined not by himself but by the view of the world which is current in the society within which his thinking apparatus has grown up. There is, therefore, need of a study, on a wide, scientific, inductive, comparative method, of the evidence which is offered among all the peoples of the earth as to the connection which exists between such ways of looking at the world, and the institutions and products of social activity which accompany them. These ways of looking at the world—*Welt-anschauungen*, as his contemporaries mostly called them—Bastian was wont to describe as *Völker-gedanken.* They may be high or low in quality, simple or complex, like the *Welt-anschauung* of this or that individual; and their value and complexity, and the nature and direction of their growth, all which will be represented in the character of the culture which they generate will depend upon the interaction of two factors—the physical organisation of the men and the characteristics of their material geographical environment. Obviously the analysis will be easiest where both the minds and the material surroundings are at their simplest and present the fewest opportunities for thought. These cases we shall detect by the simplicity—the primitiveness we call it—of the social structure and outward civilisation which results, and consequently it is among the *Natur-völker*—the "cryptograms of mankind" as Bastian used to call them—that we shall find the best materials for study.

The result of a preliminary survey shows:—First, a surprising uniformity of outlook on the part of all the more primitive peoples; second, a correlation of such differences as appear with observable differences in the material surroundings. It results from this, that we may assume, as a working hypothesis inductively established, the psychic unity of mankind—and this in the early sixties was, of course, still a burning question, scientifically and politically as well—and therefore we may concentrate our attention for the future, not on the "coincidences" between the conceptions of savages but on the discrepancies, for it is the latter and not the former which demand explanation.

It results further, that if the discrepancies correspond with differences of material environment, these will vary (broadly speaking) in accordance with the geographical conditions. And as complete isolation is the exception among human societies, stagnation —due to a final equilibrium between the inward and the outward—is the exception also. Conversely, it is mainly change of geographical conditions, as in the case of a wholesale migration, or contact along the frontier of geographical provinces, which will be the

occasion, or the scene, of contact between distinct *Völker-gedanken;* and when such contact occurs, reaction takes place, and the outlook of the people who experience such clash of ideas is modified accordingly, just as a plant changes its habit of growth when it spreads into a fresh climate. And such change and growth accordingly goes on and on till the influence of purely geographical conditions is reduced to quite negligible dimensions.

The corner stones, therefore, of Bastian's ethnology are two. The first of these is the *Völkergedanken*, which he first expounds in his greatest theoretical treatise, *Der Mensch in der Geschichte* (1860), and defends in detail in his *Beiträge zur vergleichenden Psychologie: die Seele und ihre Erscheinungswesen in der Ethnographie* (1868), in *Das Beständige in der Menschenrassen, und die Spielweite ihrer Veränderlichkeit*, in the same year, and more popularly, later, for example in *Der Völkergedanke im Aufbau einer Wissenschaft vom Menschen* (1881), and in *Wie das Volk denkt* (1892). The second is the doctrine of geographical provinces, which is implicit in *Der Mensch in der Geschichte*, and is separately treated in *Zur Lehre von den Geographischen Provinzen* in 1886.

Neither doctrine, of course, was originally or exclusively Bastian's. Alexander von Humboldt, who died before Bastian's book appeared in 1860, and Karl Ritter, the beginning of whose activity falls, like that of Waitz, during the period of Bastian's first voyage, had done much to co-ordinate the results of geographical exploration and to formulate the German view of geography as a science of the co-relation of distributions. Waitz had emphasised no less clearly in 1859 the duty of anthropology to study man as a social animal; and in the prefatory essay in the first volume of the *Zeitschrift für Völkerpsychologie* the position is clearly formulated that the form which social life has taken among mankind is, in fact, its separation into peoples; and the development of the human race is bound up with the diversity of peoples; that the *Völkerpsychologie* which is in question is therefore a comprehensive history of culture, "*idealer Stils*," and that "peoples are to be regarded as organisms," and it is in and with regard to these and their customs and laws, that "the specific peculiarities are to be studied which "give them their characteristic impress." And when it came to be a question in 1863 of translating some standard work of the German school of ethnology for the use of British students, it was again the first volume of Waitz, and not any work of Bastian's, which was selected for the purpose by the Anthropological Society.

A literary output so voluminous as Bastian's demands almost a bibliography of its own, and down to 1896 this is supplied by the practically complete list in the *International Archiv für Ethnologie* of that year. The titles of the substantive books in it extend over more than two large printed pages, and the list of shorter essays, articles, and reviews covers fourteen more. Appreciative summaries of Bastian's career and of his services to ethnology have appeared in the *Zeitschrift für Ethnologie* on the occasion of his sixtieth and seventieth birthdays, and of his lamented death (*Z. f. Ethn.* 1886, p. 256; 1896, p. 386; 1905, p. 233), and should be supplemented by the biography by Dr. Achelis in the Virchow-Holtzendorff series (1891), and from the same author's *Die Entwickelung der Modernen Ethnologie* (1889).

REVIEWS.

Archæology: Method. **Rathgen: Auden.**

The Preservation of Antiquities. Translated from the German of Dr. F. Rathgen by Drs. G. A. and H. A. Auden. Cambridge: At the University Press, 1905. Pp. xiv + 176. **77**

In this version of Dr. Rathgen's manual we possess a work of a type hitherto unrepresented in English literature. In the first third of the little volume the causes of the deterioration of antique objects wrought in certain materials are discussed from

the scientific standpoint, while the remaining pages are devoted to practical instructions of a remedial character. The instructions refer to cleansing as well as to preservative operations. Both curators of museums and private owners of ancient works of industrial and decorative art will find this book of real value. It treats of objects in metal, pottery, glass, stone, wood, silk, and leather, as well as of manuscripts on papyrus and of textiles; it does not deal with mosaics and wall-paintings, nor, indeed, with any kinds of paintings and drawings. The preservative treatment of actual buildings is not discussed. Of course, in choosing and carrying out some of the methods described by Dr. Rathgen great circumspection must be exercised. Perhaps the directions given err occasionally in the direction of being too drastic. For instance, patina does not seem always to be treated with becoming reverence, although its varieties are properly classed, in accordance with pathological nomenclature, as beneficent or malignant. But the author is himself aware of the danger of an incautious or too heroic treatment. The writer of this notice knows too well, to take one illustration, that dilute sulphuric acid, the chisel, the file, the hammer, and scouring with sand, can very rarely be employed in preparing ancient iron objects for the cabinets of a museum. So, too, with bronze coins, cleaning by the electrolytic method may involve too great a sacrifice of surface-colour and yet may fail to render the details of the pieces intelligible.

Dr. Rathgen is amply justified in his statements as to the difficulty of learning what has been done in the invention of preservative processes and in their application to antique objects. As he says, the methods, if published, have appeared in the most varied literary media or are only casually mentioned in memoirs and papers. An instance of this kind of difficulty may be cited. In a foot-note on page 95 it is said that the process of impregnating iron objects with melted paraffin was "probably first "recommended by Salzer" in 1885. But many years before this date the iron objects in the Corinium Museum had been treated in this way by the writer of the present notice, who, in the third edition of his Guide Book published in 1871, wrote, "They have "been secured from further change by a thorough soaking in pure white paraffin at a "temperature considerably above that of boiling water." Ceresin from earth-wax is to be preferred to ordinary paraffin wax, and it should have a melting point not under 150° F.

It remains to observe that this handbook is enriched by figures of apparatus and of objects before and after treatment. The author invites communications from persons having had experience of preservative methods, and expresses the hope that he may "at "some future date be able to produce a more complete work." A. H. CHURCH.

Assyria. **Edwards.**

The Hammurabi Code. By Chilperic Edwards. London: Watts & Co., 1904. Pp. xiii + 168. 20 × 13 cm. Price 2*s.* 6*d.* **78**

The object of Mr. Edwards's book is "to provide a complete and careful translation "of the whole of the great Babylonian inscription containing the Laws of Hammurabi, "and to bring together in a brief form all the known facts connected with the period "of Babylonian history to which it belongs." Since the discovery of the Code and its first publication there have been a number of works published by various writers on this subject, all more or less useful to the general reader who does not care to go to the expense of buying the elaborate work of Père Scheil. It is to this class of reader that Mr. Edwards's book appeals, and he is to be congratulated on having put together much of the material bearing on the subject in a succinct form. The principal objection to such a book is that the author is apparently unable to translate cuneiform, and his remark (p. 5), ". . . . Chinese, to which the archaic cuneiform bears a remarkable resemblance," exposes the somewhat superficial nature of his knowledge of the subject. However, Mr. Edwards has arranged his subject-matter well, and his footnotes show that he is fairly well acquainted with the literature of this particular branch of study. R. C. T.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

FIG. 1.—RELATION OF BURIALS TO WALLS.

FIG. 2.—FLINT AND STONE OBJECTS.

FIG. 3.—TYPICAL BURIAL.

FIG 4.—BEADS ON THE HEAD.

FIG. 5.—TYPICAL BURIAL.

FIG. 6.—BURIAL OF CHILD IN POT.

EXCAVATIONS AT HIERAKONPOLIS.

ORIGINAL ARTICLES.

Egypt. With Plate K. Garstang.

Note upon Excavations made 1904-5. *By John Garstang, M.A., B.Litt., F.S.A. University of Liverpool.* **79**

Hierakonpolis (Kom-el-Ahmar) was the place selected for first investigation. The palace site is well known from the researches of former explorers, and consequently the present excavations were made rather in the outlying township, which proved to be almost wholly of proto-dynastic age. Immediately below the rubbish of more recent times, strata representing the third and earlier dynasties were come upon; it was even possible in some instances to trace the walls of houses and the disposition of rooms and passages of that remote date, about 3,000 B.C. Vases of alabaster and granite, as well as flint knives of conspicuously delicate workmanship, and other small objects, served to illustrate the archæology of the time and locality. As the dry season came on, however, the ground in general proved too hard for the careful excavation demanded by so important a site, and work thereon was postponed until a more favourable season.

Meanwhile within the great fortress which stands immediately opposite upon the edge of the western desert, and seems to have been built in a contemporary age for the protection of this palace, it was found by experiment that previous excavators had not penetrated deeply enough to reach its lowest historical strata. At a depth which varied according to the accumulation of sand from two to three metres below the existing surface, a whole necropolis of the prehistoric age was discovered and excavated; 188 graves were registered and photographed in detail. They seem to range in date from about the middle portion of the predynastic sequence until the beginning of the first dynasty. The plate shows some of these burials, selected either as being typical examples of the series or for some special feature described in the letterpress. In themselves they have provided much that is of interest, and in relation to the walls of the fortress, associated with the tomb structures of later date upon the outside, have furnished reliable evidence that the fortress itself belongs to a date lying between the first and third dynasties. A photograph in the plate illustrates the approximate relation between the stratum of the necropolis and the walls of the fort.

After the completion of that excavation, after nearly two months of work, explorations were made throughout the whole region lying southward as far as Hissayeh. Tentative excavations were made at several points. At Edfu the remains seem to be of Ptolemaic times, while at Hissayeh some interesting funereal furniture and hieroglyphic papyri of pre-Ptolemaic date were discovered in the *débris* of a former excavation. Plundering during very recent times had rendered these sites unsuitable for the continuous work of an organised expedition; consequently, after the third month, camp was fixed at Esna on the northern limit of the concession.

As is often the case, rumours that the place had been plundered had in some measure saved it for the excavators. The smaller tombs of the great necropolis at once gave evidence of their origin during the Hyksos period; it seems probable (though the results of further excavation must be awaited before a definite conclusion can be established) that the site came into being during the pressure from the north in those troubled times upon the capital at Thebes. During the XVIII and XIX Dynasties the site at Esna seems to have fallen into neglect; but from the XX Dynasty, which heralded the period of the decline of the Egyptian power, about 1000 B.C., Esna again came into prominence.

Two great mounds, conspicuous in the desert from afar, proved to be tomb structures of this later date. These, cleared of their accumulated sand, disclosed great structures of brick in good preservation, which comprised a series of eight or ten chambers upon the ground-floor with a stairway leading up to a similar series above. The arches and vaults were pointed in nearly every case. In a stone-lined chamber within the largest

structure there was found the head of an apis carved in stone of the time of Ramses VI., and numerous remains of animals sacrificed at that shrine were found within the chamber. These structures were in reality great tombs, built, it would seem, for the permanent use of some family. Unfortunately a conflagration within the chambers, which seemed to have been deliberately brought about, had destroyed much archæological evidence, but the architecture illustrated is of a new interest. The largest of these tombs stood upon a base 14·8 metres (nearly 50 ft.) square, and its height was half its length, measured from its lowest course deep in the sand to the existing summit, which seems to be original.

The exhibition of antiquities discovered is being held in the premises of the Institute of Archæology of the University of Liverpool, and will remain open until the middle of October, 1905. JOHN GARSTANG.

Archæology: Eoliths. **Abbott.**

Machine-made Eoliths. *By W. J. Lewis Abbott, F.G.S.*

80

The note of Mr. Dalton in the August number of MAN will be gladly received by all interested in the subject of the greater antiquity of man. But, unfortunately, there is a number of facts presented by the note which prepare us for what we may expect when we see the actual specimens and hear the arguments brought forward. But as I have not seen either of these I will confine myself to Mr. Dalton's extract. The inaccuracy of the general statements at once precludes the possibility of their truth, the terms are too loose and generalising to be of any scientific value. Fancy, for instance, making such an assertion as, that the flints in the washers are subject to every conceivable kind of pressure and shock! Assuredly the writer of this sentence has never watched the multifarious beach operations or studied the vicissitudes of gravel making; the collective results of which produce altogether closer counterfeits of plateau flints than the process of washing in cement-making. Then, again, evidently the writer thinks that blows, pressure, and shock, exhaust Nature's possibilities. Starchy or prismatic fissure, internal disruption, spontaneous brecciation, expansion and contraction under thermic changes with their pseudo-flaking and all the other natural processes, leave their mark upon some of the plateau flints; how, then, could the cement-maker's vat produce examples of all the eolithic forms? There is yet the important fact that the "discovery" is by no means new. By the irony of fate, one of the collectors of plateau flints, Mr. Percy Martin, is himself a cement and whiting manufacturer, and for over forty years he has been examining all the refuse flints of his vats for anything of scientific value, but up to the present he has discovered nothing to throw doubt upon the human origin of the things under consideration. For many years I did the same, not only at this manufactory but at any others I could find. But after living eight years by the sea shore and daily walking over and noting the possibilities of shore action, I unhesitatingly maintain that I can produce better results at rude simulation from the beach, than anything I have seen from the cement-maker's vat or gas-engine blast hole.

I am quite willing to admit that I have very many hundred specimens from the beach, that none but he who had specially studied the subject could distinguish from the plateau flints except by colour, but I can go further than this and include many palæoliths and even neoliths. Will our good friends be satisfied with ruling only plateau flints out of court, and not the palæoliths and neoliths also?

Very many years' careful study of the subject leads me to maintain that although we may never be able to draw a hard-and-fast line between man's earliest attempts at altering the shape of a flint and the operations of Nature, any more than we can say where one colour ends and another begins in the spectrum, yet as we can with safety put our pointer upon what we can fearlessly call a red, or a blue, so also there are certain

features in the plateau flints (which I admit worthy of the name) that I have not seen in any of Nature's counterfeits, and *vice versâ*.

I regret I must admit that the real battle of the plateau flints has yet to be fought! and that my highly esteemed old friend, Sir Joseph Prestwich, was a little prophetic in his claims. But we now possess a vast amount of information that was not at hand when he published his classic papers. There is, however, another almost insuperable difficulty with which I feel myself confronted; it is this, that a large proportion of the specimens which have been paraded as eoliths by over-zealous collectors are obviously nothing more than natural products! and further, a large proportion of the rest might just as well have been produced by nature as man! But behind these come the comparatively few which physics, chemistry, and geology claim as the work of man in an evolutionary state in pre-palæolithic times. It is when one realises that these things exhibit an evolutionary history, contemporary or synchronous, with geological changes of no small magnitude, and that they present differences among themselves so great and marked as to enable us to throw them into stages, each stage being marked by special features, that we realise the disqualification of anyone to deal with the subject who would claim for the products of the vat that "the greater majority presented examples of all the eolithic forms."

This part of the subject is, of course, too extensive to be touched upon here. But I may, perhaps, be permitted to say that some twelve years ago I formulated a classification for these things and the deposits in which they are found, and every subsequent discovery has found a natural place in it and confirmed the correctness of the scheme. I may, perhaps, also be allowed to say one word upon one stage—called by me the "Fawkhamian," as the products of this are so far removed from the possibilities of the cement tub. In this stage the rounded hammer stone was discovered and the art of free flaking acquired, with a perfection that would not have disgraced one of the palæolithic stages much higher up in the sequence.

But the greatest curiosity of this stage is, that the evolution of forms did not keep pace with the development of manipulative skill, with the result that we have the preponderance of use-incomprehensible forms with a free-flaking that leaves nothing to be desired. The outlines, although precluding ideas of use, are nevertheless identical with those of the earlier stages, when results were obtained by crude battering, with here and there a lucky free-flaking. The edges are really skilfully free struck; although the art of the acute edge is not yet attained. But the most important thing is, that once having gained the knowledge of the round hammer stone, free-flaking became possible, and we get magnificently parallel-flaked blades 8 or 9 inches long, say, by 1½ inches wide, and not more than half an inch thick, worked at the edge in the same rectangular fashion that characterises the crude forms of the earlier stages. Needless to remark that such a feat is altogether beyond the powers of the cement tub; nor could so delicate a weapon come into existence under, nor stand the ordeal of, violent torrential conditions "exposed to every conceivable kind of pressure and shock." Probably M. Boule and his esteemed *confrères* had not the slightest idea that such specimens as here described had been found, or assuredly they would never have put forth these ridiculous generalising statements. Unfortunately they have also left their eyes, trained to scientific observation, quite out of it when they approached this question. Had they spent the necessary time upon the seashore they would have seen the pebbles thrown up by the fury of the waves falling upon their fellows, now producing an incipient cone of percussion, now under fortuitous conditions removing a flake, or splitting a pebble with a perfect bulb and pit of percussion. But for every one of either of the latter two there would be perhaps scores—perhaps hundreds of the former, of every degree of intensity—from those which the unaided eye could not see and which would require long imbedment in ferruginous waters to develop, to the removal of the flake.

But every action would be recorded upon the surface of the pebble as clearly as on a Morse printing machine. If we examine the products of the cement tub we see the same thing. On the other hand eoliths have been found in large numbers as fresh as can possibly be, without ever having been submitted to any rough treatment whatever, and without one single incipient cone of percussion upon their surfaces. Obviously, then, they were not produced under similar conditions to those obtaining in the cement tub.

W. J. LEWIS ABBOTT.

America, North: Craniology. **Pocock.**

Crania from Shell-bearing Sand-hills near San Francisco, now in the Cambridge Museum. *By W. Innes Pocock. Communicated by A. Macalister.* **81**

Through the kindness of Professor Macalister I have had the opportunity of examining and measuring the above, hitherto undescribed crania in the American division of the Cambridge collection of skulls. Three of these are from a fossil shell bed; the fourth from sand-hills in the same district. Unfortunately, the facial skeletons are almost entirely wanting; a certain amount of information is, nevertheless, to be gathered from the fragments which remain.

For a small number the range of cephalic index is fairly large. One of the crania is dolichocephalic. If, however, the conventional two units be added to the indices, the four crania will just fall within the limits of the mesaticephalic division, and considering the great variation which has been found to exist in the crania of American aborigines known to be closely connected by language or other ethnic peculiarities, there does not seem to be any reason against assuming that these four skulls may have belonged to members of the same tribe or the same community.

The capacities (estimated) do not disclose (except in one instance) microcephalic proportions. Yet it is difficult to dissociate these crania from the ideas which would connect them with a savage or primitive race of men. The frontal contraction, the position of the foramen magnum and of the lambda, the roof-shaped parietal flattening all point to such a conclusion. I have not been fortunate enough to see any other skulls from this locality, or to find records of their measurements. Mr. Lucien Carr, however, gives* the mean dimensions and indices of 134 male and female crania from the Santa Barbara Islands, which appear to be comparable with those of the present specimens, though the markedly dolichocephalic skull selected as typical of that locality by Virchow† is not. But fortunately I found a better material for comparison among the crania at hand.

Among the North American skulls in the Cambridge collection are a number from the Pacific seaboard; and among those which do not show the evidences of artificial distortion are some Columbian and Vancouver Island skulls which presented superficial resemblances to the San Francisco crania. Measurements appeared to confirm the first impression. Four which I selected showed a variation in size and shape between much the same limits and between pretty similar types. The cephalic index of one of these was exactly the average of the four Californian skulls, the height index presented the same coincidence. This accident, pending observations of a much larger number of specimens, must be called a freak of the method. Nevertheless, it betters the utility of the comparison. It remains to say that I have, for obvious reasons, given my own measurements of the crania thus taken for comparison.

It may be added that there is one feature common to the four San Franciscan skulls which is absent from the more northern specimens, namely, a noticeably high

* *Notes on the Crania of New England Indians* by Lucien Carr. Published by the Boston Society of Natural History, 1880.

† *Crania Ethnica Americana, Sammlung auserlesener amerikanischer Schädeltypen.* Berlin, 1892.

lambda. This characteristic is to be seen in the cranium from Koskimo, Vancouver Island,* figured by Virchow, which in other respects, such as the parietal flattening and the position of the asterion, resembles the Californian specimens.

The capacities have been estimated from Lee's general formula, using the ophryo-occipital length, a precaution which seemed to be demanded by the retreating frontal bones of the crania. In the case of one of these (1862) Manouvrier's formula gives a rather lower, and in one (1864) a considerably higher figure. In both these cases, however, the height multiplier for the latter formulæ is tentative. It should be said also that the fourth cranium (1865) is decidedly massive. It may thus well be more microcephalic than the estimated figures would indicate.

Appended are a table of the principal measurements and descriptive notes of the individual specimens.

1862. Fossil shell bed, San Francisco.—A calvarium with small portions of the facial bones remaining. It is cracked and broken in places, but the bone is otherwise well preserved. It appears to be that of an adult male.

N. V. Mesaticephalic.—The shape is ovoid, but the frontal rounding is not well seen owing to the external angular processes of the orbits, almost the whole of which are visible. There is thus post-orbital contraction, and though the zygomata are wanting, it can hardly be doubted that the specimen was phænozygous. The sutures are moderately complex, the sagittal denticulations rather deep than numerous. There is plagiocephaly affecting the right parietal bone.

N. L. Metriocephalic.—The glabella and brow ridges fairly well developed. The portions remaining of the nasal bones are prominent. The frontal retreats to the bregma in a wide arc with long post-metopic limb. The curve of the profile is greatest at the metopion, obelion, and just above the occipital torus. There is flattening behind the bregma and again above the lambda. The vertex is scarcely higher than the bregma. The squamous suture descends very gradually, a large wormian bone marks its angle with the parieto-mastoid, and the asterion is far back. The mastoid processes are of moderate size; their ends are free when the calvarium rests on the opisthion. The sphenoid and parietal bones articulate at the pterion.

N. F.—The supra-orbital notch is represented on either side by a well-marked foramen. The (left) orbit is megasome. A small piece of the malar bone remains, showing that this bone was just excluded from the spheno-maxillary fossa. The upper part of the frontal bone on either side is marked by the groove of the supra-orbital nerve. The contraction of the frontal bone mentioned above is here again seen.

N. B.—The petrous portion of the right temporal bone is nearly complete. The glenoid fossæ are deep. The ends of the spinous processes of the sphenoid bone project.

N. O. A pentagonoid shape showing parietal flattening.—The parietal eminences are well but not sharply marked. The right is the higher owing to the plagiocephaly before noticed. The lambda is high, there is a parietal foramen two centimetres above it on the left. The occipital ridges are well developed externally and internally. A slight foraminulated depression marks the position of the inion. In the deep surface of the bone posterior to the opisthion there is a triangular area marking the division of the internal occipital crest.

1863. Fossil .shell bed, San Francisco, presented by Dr. Macintosh.—Part of a calvarium. The facial bones, and on the right, the temporal and part of the parietal bones are wanting. The bones are well preserved, though much broken. They appear to be those of an elderly individual of the male sex.

* *Crania Ethnica Americana, Sammlung auserlesener amerikanischer Schädeltypen.* Berlin, 1892.

N. V. Mesaticephalic.—Moderately well filled. The shape is pentagonoid, the surface without irregularities. The sagittal suture, partly synostosed, shows denticulations rather deep than numerous. The zygomata are wanting.

N. L. (Left side).—Well developed brow ridges. The frontal bone retreats slightly to the metopion, the hinder limb of its curve is long. From the bregma to the occipital protuberance the curve is continuous. The mastoid processes are of moderate size, the asterion far back. The course of the squamous, together with the parieto-mastoid suture, is nearly rectilinear. The sphenoid and parietal bones articulate at the pterion.

N. F.—Well-marked, deep foramina represent the supra-orbital notches. The facial bones are almost entirely wanting.

N. B.—Portions of bone on the left side only remain. The spinous process of the sphenoid bone projects and turns into the Glaserian fissure. The surface of the tympanic plate is irregular. The digastric fossa is deep and narrow, its inner margin nearly level with the tip of the mastoid process.

N. O.—There is some parietal flattening on either side of the sagittal suture. The parietal eminences are well but not sharply marked. The walls of the skull are nearly parallel with faint plagiocephaly. The lambda is high to the right of the median line, the lambdoid suture asymmetric. The superior curved line is strongly developed.

Inside the calvarium small Pacchionian depressions are to be seen near the sagittal suture, and one in the left frontal bone.

1864. Fossil shell bed, San Francisco, presented by Dr. Macintosh.—An adult calvarium in good preservation. The left malar bone and minute parts of other facial bones are attached. The sex is uncertain. The characters are undoubtedly of a feminine type. The size, however, is unusual. It is larger than the largest of the twenty-nine female New England crania, the measurements of which are given by Mr. Carr; and this is not all. For the three other crania of the series under consideration are all smaller than the average of Mr. Carr's male crania. On the other hand, if we dissociate this San Francisco cranium from the others and compare it with the North-Western crania which it resembles, we find it is exceeded in size by two of these, the masculine character of which is not doubtful. In this conflict of indications it does not seem possible to determine the sex with any certainty.

N. V. Dolichocephalic.—The shape is regular, its ovoid character slightly obscured by the development of the parietal eminences. The bone surface is partly destroyed in the lower half of the coronal suture on either side. The sagittal suture is moderately denticulated. The surface of the cranial vault is smooth, not well filled. The zygomatic arches are wanting.

N. L.—There is moderate development of the glabellar prominence. The frontal retreats gradually in a continuous curve. There is flattening behind the bregma, but the vertex is far back and noticeably higher. There is flattening from above the obelion to below the lambda. The occipital bone descends steeply forward, the mastoid processes are of moderate size, the asterion far back, the squamous suture but slightly arched in its posterior decline. There are remnants of the squamoso-mastoid sutures in the mastoid processes. The ends of these processes are free when the calvarium is made to rest on the opisthion. There is parieto-sphenoid articulation at the pterion.

N. F.—Except small fragments, only the left malar bone remains of the facial portion. The left eye appears megaseme. Foramina take the place of the supra-orbital notches. There is contraction of the frontal bone behind the external angular processes of the orbits. The transverse arc of the frontal approaches the apse of a parabola in shape.

N. B.—The digastric fossæ are deep, the tympanic plates irregular with long curling extremities, the left one overlapped by the spinous process of the sphenoid. The spinous processes run into the Glaserian fissures. The foramen magnum is very far back. The glenoid fossæ are deep, the occipital crest and the linea inferior well marked. The condylar parts and the styloid processes are broken. Some large Pacchionian depressions are visible in the interior.

N. O.—The skull walls diverge slightly from below upwards, and the cranial vault is distinctly roof-shaped. The lambda is high. The parietal eminences are distinct but widely rounded. The position of the inion is marked by a foraminulated depression just above the linea superior.

1865. Sand-hills, San Francisco.—A calvarium wanting portions of the base, and all the facial bones except the right malar. Probably an adult male. The bone is massive and heavy. The surface is much weathered.

N. V. Mesaticephalic.—The shape is ovoid, but posteriorly has the tapering extremity of the true pentagonoid skull. The skull cap is not well filled. The coronal suture is complex; the sagittal shows a moderate number of rather deep denticulations. The zygomata are wanting.

N. L. Acrocephalic.—The glabellar region is of moderate development. The cranial curve is almost continuous to the linea suprema. The vertex is, however, distinct, and the descent of the curve rather less behind it than in front. The occipital bone descends steeply forward, the asterion is far back, the squamous suture very simple, almost making a straight line with the parieto-mastoid. The mastoid processes are rather small and do not reach the low level of the nuchal bones. There is parieto-sphenoid articulation at the pterion.

N. F.—The right malar bone is nearly complete and shows that the orbit was megaseme.

N. B.—The left occipital condyle is wanting. The right is of large size. The foramen magnum is rhomboid, the glenoid fossæ of moderate depth. The right spinous process of the sphenoid bone is large and turns into the Glaserian fissure. The notch which represents the foramen spinosum leaves the process as a peninsula of bone overlapping the extremity of the tympanic plate. The space between the anterior margin of the foramen magnum and the ridge connecting the anterior edges of the condylar articular facets is marked by a small groove.

N. O.—The shape is nearly square, surmounted by a well-marked roof. The nuchal lines are hardly visible; no prominence marks the position of the inion. A distinct ridge declines from the vertex on either side of the sagittal suture, curving outwards and terminating in the lowest quarter of the lambdoid suture, with which they enclose a flattened space shaped like a triangle with concave sides. The parietal eminences are widely rounded.

These notes would be incomplete did I fail to refer to the important work of Eisen* and Matiegka* on the now unhappily extinct Santa Barbara islanders. According to Dr. Eisen these Indians, of two or more linguistic families, were taller and better built than those of the mainland or further north, their women and children fairer. They buried their dead near their dwellings doubled up and face down, under a slight covering of soil. Matiegka describes, *inter alia*, fifteen male and female skulls from Sta. Rosa Island, in terms similar to those used by L. Carr in characterising the average Sta. Barbara cranium, with the difference that he finds no positive evidence of artificial deformation. Of the fifteen, but one is pentagonoid, three ovoid, the rest ellipsoid or

* Eisen, *The Indians of Santa Barbara in California.* Matiegka, *Ueber Schädel und Skelette von Santa Rosa (Santa Barbara Archipel.) bei Californien. Sitz der math. nat. kl. der kgl. Böhm. Ges. der Wiss: Sitzung vom* 8. *Januar* 1904. A good list of references to the literature of the subject is appended to each of these papers.

elongated ovals. Flattish, with bulging occiputs they exhibit *in norma occipitalis* a pentagonal shape (less marked in the females); facially, a narrow frontal bone. It must not be forgotten in stating these terms of comparison that the Sta. Barbara islands are 300 miles and upwards to the south of San Francisco.

The foregoing details, at the moment inaccessible, were kindly communicated to me by Mr. W. L. H. Duckworth.

TABLE OF MEASUREMENTS AND INDICES.

Number.	1862.	1863.	1864.	1865.	1842.	1846.	1854.	1855.
Description Provenance.	Fossil Shell Bed, San Francisco.	Fossil Shell Bed, San Francisco.	Fossil Shell Bed, San Francisco.	Sand-hills, San Francisco.	New Westminster, British Columbia.	Vancouver Island.	Vancouver Island.	Vancouver Island.
CRANIAL PORTION.	G. O.	G. O.	G. O.	G. O.	G. O.	G. O.	G. O.	G. O.
Maximum length*	177 175	175 173	189 187	171 168	192 188	171 168	192 190	180 179
Maximum Breadth†	133 P.E.	134 P.E.	140 Sq. Sut.	132 Sq. Sut.	145 Sq. Sut.	133	138 P.E.	136 P.E.
Basi-bregmatic height	131 ?	?	139 ?	134	145 ?	127	148	140
Horizontal circumference	488	484	520	478	527	485	524	508
Capacity, cubic centimetres	1,362	?	1,563	1,282	1,563	1,289	1,594	1,470
FACIAL PORTION.								
Orbital height (left eye.)	31	—	? 33	? 34	36	—	34	—
Orbital width (left eye.)	38	—	? 35	36	40	—	40	—
Least frontal width	83	—	88	89	—	94	80	87
Auricular bregmatic height	118	—	126	114	121	114	129	125
Auricular Radii :—								
Nasion	88	—	98·5	88	97	94 ?	100	96
Vertex	122	—	130	116	122	120	131	125
Lambda	111	—	115	102	110	97	108	103
Inion	76	—	81	71	86	74	84	83
Sagittal Arcs :—								
Frontal	120	132	125	117	127	110	132	133
Parietal	110	110	122	105	250	114	130	129
Occipital	127	—	123	123		112	123	111
Sagittal circumference to opisthion.	357	—	380	345	377	336	387	373
INDICES.								
Cephalic	75	76·5	74	77	75·5	77·5	72	75·5
Altitudinal	74 ?	—	73·5 ?	78·5	75·5 ?	74·5	77	77·5
Orbital	90	—	94	94·5	90	—	85	—

* G. = Glabella. O. = Ophryon. † P.E., i.e., nearer to parietal eminences. Sq. Sut, nearer to squamous suture.

W. INNES POCOCK.

Magic. Thomas.

A Further Note on Magic. *By N. W. Thomas, M.A.* **82**

My remarks on the terminology of magic (MAN, 1904. 107) were written before the appearance of the *Année Sociologique*, Vol. VII., and I was unable to take account of the discussion of the question by MM. Hubert and Mauss. The issues raised by their paper are so numerous that I must perforce leave some undiscussed; the more so, as the difference of opinion between us seems on many points to be fundamental.

Before offering a few criticisms, I may, perhaps, allude to a point which I neglected in my former note. If magic is the attempt to produce results by the simple operation of causation, irrevocably fixed and acting according to law, but not such causation as is actually existent, what view are we to take of the magical acts which do produce a result, though not in the way intended? For example, the doctor professes to extract one or more cockroaches from his patient's head, and the sufferer's headache is relieved by the effect of their suggestion; or, to take an instance, the validity of which some will not admit, the diviner scries in his crystal, and the vision which he sees, though not due to spirits, or to anything to which I am prepared to term magic, is veridical. Can we term these operations magical because the operator regards them as such? Or must we not rather have regard to some more objective criterion?

MM. Hubert and Mauss (p. 13) argue that magical acts are not those which are recognised as such by the operator and spectator only, for this would be to erect a subjective criterion, but those which a whole society terms magical. I cannot see that their definition is less subjective than the one they reject. In Australia and America, for example, before the advent of the whites—and in Europe itself, for that matter—until modern times hypnotism and the phenomena we now term sensory and motor automatism were regarded as magical. Do they cease to be magical when one sceptic suggests that they are not so? It is clear that the scepticism may be of two sorts: (1) negative, which denies the existence of any result, and which, so far as it is correct, justifies us in designating the acts in question by the name of magic; and (2), positive, which admits the result, but denies that it was reached in the way intended. Does either kind of scepticism justify us in denying the magical character of an act, and if so, which?

Two questions are therefore raised by the definition of MM. Hubert and Mauss: (1) What is meant by a Society? Does the existence of one enlightened Fuegian change the character of the acts of his fellows? Are we justified in separating one race from another, or do we mean by society the whole of mankind? (2) Again, when a savage terms an act magical, he means something very different from what MM. Hubert and Mauss mean. If all mankind agree in calling an act magical, but mean thereby totally different things, according to whether they regard the act as effective or ineffective, are we justified in regarding that act as magical?

The objective criterion of effectiveness seems less open to objection, but, as I have shown above, we find ourselves confronted with a problem if we adopt it. The dilemma is more apparent than real. It by no means follows that a man of science is a magician if he attributes to one cause, even a non-existent one, what is really due to another. Belief in the materiality of heat did not make Priestley a magician. Nor did the fact that the vanes of a radiometer do not turn for the reason assigned by the discoverer put Sir William Crookes on a level with a medicine man, even though his views on certain subjects may make him, in the eyes of some of his fellows, little, if any, superior to a savage shaman. If, therefore, we say that *quâ* effective a savage rite ceases to be magic and becomes science, the position of rites of leechcraft and divination becomes clear.

Another criterion suggested by MM. Hubert and Mauss is that of publicity (p. 19). For them the magical rite flees the light of day. What then of the rainmakers? Are not their rites magical? The Intichiuma ceremonies are for our authors religious, and it would take me too far to discuss them; but I can cite the European spring and summer ceremonies without much fear of meeting with a similar answer. Are the rites of vegetation, the bonfires, the rain charms, the expulsion of evil, and so on, not magical, and if so, are they not public, nay acts of the society?

I may note that our authors are disinclined to class as magical any element in a religious rite. Thus they refuse to see anything but a religious ceremony in the rain

charm performed at the feast of Succoth by the high priest. Would they also class the douching of a saint's image as religion? If so, I cannot guess what definition of religion they are prepared to adopt.

Another point on which some difference of opinion is permissible is the character of the wizard's familiar. For MM. Hubert and Mauss it is always the species and not the individual animal which is associated with the magician (p. 32). It is true they admit some exceptions, but these exceptions are far more numerous than they suspect. In North America the *manitou*, or medicine-animal, is undoubtedly the individual (*Journ. Anthr. Inst.*, XXI., 31). The medicine may be lost, and once lost is irrecoverable. Among the Eskimo the *tornaq* is an individual bear (*Rep. Bur. Ethn.*, 1884-5, p. 591). The *pawang* of the Malays is held to be associated by the soul of an individual tiger (Newbold, II., 387), unless appearances are very deceptive. Torrend (*South African Bantu Languages*, p. 292) tells us that magicians keep a snake in their pouches, and here again it seems to be the individual animal. So, too, in Siberia (*Journ. Anthr. Inst.*, XXI., 133), in Celebes (*Tijdskr.*, XLI., 548), and elsewhere. MM. Hubert and Mauss can, perhaps, cite cases in which the magician spares the species. But against this I urge that this proof is hardly conclusive; they may spare the species and yet regard the individual animal as their "nearest friend." The clearest proof of this lies in the fact that his life is regarded as bound up with that of the individual animal. In a remarkable account of the performance of the blood bond between a human being and an animal, Père Buléon says (*Sous le Ciel d'Afrique*, p. 90 *sq.*): "Avez-vous tué "une panthère, vous ne tarderez pas à apprendre la mort de quelque féticheur," and congruent observations are found in other authors. I see little or no evidence that the shaman is associated with the species rather than the individual and much that indicates the reverse.

I am far from having exhausted all points of controversy, still less all points of interest in the valuable memoir on which I have commented; only considerations of space forbid me to pursue a fascinating subject still further. N. W. THOMAS.

India: Fire Walking. Hearn.

Passing through the Fire at Phalen. *By Captain G. R. Hearn, R.E.* **83**
Communicated by H. H. Risley, C.S.I., C.I.E.

Phalen is a Jât village some three miles east of Kosi, in the Mathura District of the United Provinces of Agra and Oudh. For many years it has been the custom in this village (and, so far as I am aware, it is unique in this respect) that a Brahman, called the "Panda," shall pass through the fire on the day or night of the full moon of Phalgun, which ushers in the Holi festival. This ceremony has been described by Growse in "The Mathura District Memoir," but a fuller account may be of interest.

Like nearly all the villages in these parts, Phalen possesses a tank, from which mud has been excavated to make the houses of the village. After the lapse of centuries, new houses being built on the ruins of earlier ones, which have dissolved into earth again, the village of to-day is elevated on a mound. But the village "square," which adjoins the tank, is at the pristine ground level, and this may show the great age of the ceremony to be described.

Rather to one side of the square, and on the side furthest from the tank, is a small whitewashed mud "shrine." Into this, some eight days before the Holi festival, the Panda enters and spends his time in prayer and fasting, his only food being milk. A bonfire is made half-way between the "shrine" and the tank with a substratum of cowdung cakes and a superstructure of dry thorn bushes of the "Rarîl," or wild caper. This would measure when completed roughly 10 ft. by 8 ft. by 10 ft. high, the cowdung substratum being about 3 ft. high. I observed women winding skeins of cotton thread round this bonfire before the lighting, and worshipping it. This was during the after-

noon when the village "square" is full of noise and people dancing, beating kettle drums, and jumping up and down. Some men also, dressed in long white garments with faces painted red and apparently half-stupid with drink, were posturing in a sort of slow mock fight with daggers in their hands, leering horribly as they circled round. At night, however, all is quiet and the people are collected on roofs and even in the trees, so that the effect of the liquor, of which all are supposed to take a little, has worn off.

On the two occasions when I have been present the ceremony has taken place between two and four in the morning. Some say that an auspicious hour is fixed by an astrologer, but the Panda sitting in his "shrine" constantly passes his hand through the flame of a lamp, and I understand that when this no longer burns him he declares the hour to have arrived. The fire is then lit, and the villagers of Phalen, armed with short clubs, circle round the fire, dancing and keeping the people away. The dry thorns blaze up with great heat, and if the Panda passed through at once it would be a marvel if he escaped without severe burns. But he leisurely divests himself of his long white coat and goes down to the tank attended by an old woman. He enters the tank and dips two or three times, attired only in "pagri" and loin cloth, and then advances towards the fire. The old woman precedes him with a brass "lota" full of water, which she throws on the edge of the fire, and then with a rush the Panda goes through, his legs sinking nearly to the knee in the burning cowdung, the flames of which are, however, not very severe. He then runs round two or three times, and, putting on his coat, proceeds to his own house. I found him there, afterwards, apparently unhurt, and, indeed, he declared that the hair on his legs was not singed, but at night it was difficult to ascertain this. He informed me that the duty is handed down in the family, and that only on his deathbed would he pass on the secret "mantras" to his successor. He holds lands in the village on condition of his annual performance. I may say that neither before nor after was there the smallest suspicion of his being under the influence of any drug, for he was calm and collected and readily answered questions.

Phalen lies in the country of Braj (pronounced "bridge") specially sacred to Krishna, the favourite avatar of Vishnu. It is, therefore, not surprising that the legend related to me as the foundation of this ceremony should be Vaishnavite. They say that there was one Hirancasyipa, a tyrant king, who had a young son, Prahlad. This boy was very devout and continually called on God to the anger of the impious king, who said, "Rather call on me." But Prahlad refused, and Hiran Kas (as they call him now) then ordered that he should be cast from a rock. Prahlad, however, survived this and also an attempt at poisoning, whereupon Holi, the king's sister, proposed to bind him in his clothes and cast him into a fierce fire. This she did with disastrous results to herself, for the fire consumed her, and Prahlad emerged unhurt, though his clothes were burnt. The biblical story of Shadrach, Meshach, and Abed-nego is a close parallel. Hirancasyipa was rent to pieces by Nar Singh, the (fourth) man lion incarnation of Vishnu. This, they say, was the origin of the ceremony, and in other places they light the fire to "burn Holi," though there is no passing through.

At two other Jât villages in the northern part of the Mathura district, Jan and Bâthen, a peculiar game, is played about the time of the Holi. The men arm themselves with branches of trees and form a ring, while the women with stout "lathes" or staves, and with "saris" drawn over their faces, fiercely assault the ring and break it, soundly belabouring the men. Separate rings are formed by the Jâts and by the Chamars or low castes. Finally they return to the village in pairs, the man chanting a song, and the woman, when he has finished, driving him on a few paces. This also I believe to be unknown elsewhere, and it is significant that the players belong to the Jât race, supposed to be of Aryan descent.

G. R. HEARN.

REVIEWS.

North America. **Bourne : McMaster.**

84

Narratives of the Career of Hernando de Soto in the Conquest of Florida, as told by a Knight of Elvas and in a relation by Luys Hernandez de Biedma, Factor of the Expedition, translated by Buckingham Smith ; together with an account of De Soto's expedition, based on the diary of Rodrigo Ranjel, his private secretary, translated from Oviedo's *Historia General y Natural de las Indias*. Edited, with an introduction, by E. G. Bourne. London : David Nutt, 1905. 2 vols. Pp. xxvii + 223, iv + 192. (Great American Explorers Series.) Price 7*s.* 6*d.*

History of the Expedition under the Command of Captains Lewis and Clark to the Sources of the Missouri, thence across the Rocky Mountains and down the River Columbia to the Pacific Ocean, performed during the years 1804–5–6 *by order of the Government of the United States.* A complete reprint of the Biddle edition of 1814, to which all the members of the expedition contributed, with an account of the Louisiana purchase, by Professor J. B. McMaster, and notes upon the Route. 3 vols. Pp. xx + 416, vi + 410, vi + 382. (Same publisher and series.) Price 10*s.* 6*d.*

The title pages above quoted are almost copious enough to dispense with the further description of the contents of the volumes. After the discovery of Florida by Ponce de Leon in 1512, all attempts to conquer it had failed, and Soto obtained from the King of Spain in 1538 a commission as Governor in the hope that he would be more successful. He was accompanied by about 600 men, one of whom, a gentleman of Elvas, kept a journal of their proceedings. Another journal was kept by Ranjel, and was worked up by Oviedo into a connected narrative, interspersed with his own observations. A third authority is the report made to the King of Spain in council by L. H. de Biedma, in 1544. These three narratives form the substance of the two volumes dealing with De Soto's expedition. His explorations extended beyond the present State of Florida, and included the discovery of the great Mississippi River. All the accounts agree in recording the cruelties practised by the Governor, who "was much "given to the sport of slaying Indians." He threw to the dogs an Indian guide and an Indian woman whom he suspected of deceiving him, and did many other cruel acts. Soto died in 1542. From an anthropological point of view, the narratives are interesting as being the earliest descriptions we possess of the life and manner of the Choctaws, the Cherokees, the Creeks, and the Seminoles. Of these, the only tribe remaining in the existing State of Florida are the Seminoles, who in 1880, according to Mr. MacCaulay's account in the Fifth Report of the Bureau of Ethnology, numbered 112 males and 96 females. At the time of the Seminole war, Mr. Dallenbaugh (*North Americans of Yesterday*, 445) estimates that there were probably not more than 400 warriors, yet the whole available force of the United States, besides some 50,000 militia and volunteers, was engaged against them, at a cost of 6,000,000*l.* and of 3,000 lives. It is not surprising that they are still "decided in their enmity to the white man's government."

The second work under notice is an ample account of the journey of Captains Meriwether Lewis and William Clark, both of the United States' Army, from St. Louis along the great Missouri River to the Rocky Mountains and thence to the Pacific. It thus begins where the discoveries of De Soto ended. Lewis, the principal leader of the expedition, had been private secretary to Thomas Jefferson, President of the United States. He left St. Louis in December, 1803, returned in September, 1806, and in 1807 was appointed Governor of Louisiana, which had been ceded to the United States by France in 1803. He died in 1809. The work is founded mainly upon his notes and upon information supplied by Captain Clark and the other members of the expedition. Among the subjects into which Captain Lewis was directed to enquire were the names of the nations and their numbers ; their language, traditions, monu-

ments, ordinary occupations, food, clothing, diseases, moral and physical circumstances, laws, customs, and dispositions; and he was also instructed by the President, in all intercourse with the natives, to treat them in the most friendly and conciliatory manner, to allay all jealousies as to the object of the journey, and to satisfy them of its innocence and of the wish of the United States to be neighbourly, friendly, and useful to them. He appears from the narrative to have acted, sometimes under difficulties, in the spirit of those instructions, and the volumes contain in consequence a great amount of interesting first-hand information on these subjects. The native tribes have since then been investigated very thoroughly by methods of modern science, but the observations of these early explorers have a freshness and living interest of which they cannot be deprived, and which gives them an enduring anthropological value.

Mr. Nutt is to be thanked and congratulated for placing in the hands of the English reader, in a handy and inexpensive form, those valuable and scarce records of early American exploration, and we hope that their circulation will be such as to induce him to continue this series of neat and useful volumes. E. B.

Pacific Islands: New Hebrides. **Lamb.**

Saints and Savages: The Story of Five Years in the New Hebrides. By Robert Lamb, M.A. (N.Z.), M.B., Ch.M., B.D. (Edin.), formerly Superintendent and Hon. Superintendent Medical Mission, Ambrym, New Hebrides, with illustrations by **85**

FIG. 1.—MONUMENTS OF SOCIAL RANK.
(Reproduced by courtesy of Messrs. Blackwood and Sons.)

Julian R. Ashton, Sydney, N.S.W. Edinburgh and London: William Blackwood & Sons, 1905. 24 × 15 cm. Price 6*s*.

Saints and Savages is an account of a missionary's experiences during a five years' residence on Ambrym Island in the New Hebrides group, and contains much of anthropological interest scattered through its pages. It is well written and can be read by anyone with considerable profit and amusement.

The author has materially added to our knowledge of this important group, as until the publication of this work very little was known of the inhabitants of Ambrym Island.

The native life with all its ramifications is fully described. "Every village has its "constitution and its institutions, every tree and every hut an owner, and every man a "policy." At the head of each community there is a chief or *mal*, who alone is allowed to live within a walled enclosure, called a *war-war*. This at his death becomes his tomb, for the entrance is then closed and the hut and body are left to decay. At one side of the *war-war* stands an altar or *maki* built of coral rock used for the ceremonial killing of pigs; this altar is surrounded by grotesque figures carved from inverted fern-tree trunks (Fig. 1), these are also called *maki*, and some of the larger ones are placed under a bamboo screen. Close at hand are a group of native gongs. Mr. Lamb rejects the theory that these *maki* are idols; he says: "Take first the altar; "there is no trace of worship or sacrifice connected with it. It is simply a monumental "receipt that the chief has paid for his wives. The painted images are signs or monu- "ments of social rank, just as a student displays his diploma. So when a chief attains "a certain rank or receives a new name to indicate his rise in the social scale, the chiefs "greater than he erect the *maki* for him" (cf. Codrington's *Melanesians*, p. 174).

Their religion consists chiefly in "their belief in, and commerce with, spirits and ghosts,' the latter by means of their chief. Spirit stones enter largely into their daily life; Mr. Lamb figures one which was supposed to jump when danger was near and to whistle at night to give warning. The greatest evils with which the missionaries had to contend were (1) the vendetta, for no man was considered to have died a natural death; and (2) the introduction of fire-arms and alcohol by the traders. In addition to these I might mention a greater evil still introduced by the missionaries themselves. In the earlier part of the book Mr. Lamb describes the costume of the natives as follows: Their scant attire need not be taken as an indication of a want of modesty—they are as modest as ourselves, and a strip of leaf is as much to them as a whole suit of clothes to us. Many of the women are possibly as modest as their over-dressed sisters, yet towards the end of the book clothing is becoming the fashion and the women are described as dressed in all the colours of the rainbow and the chiefs in scarlet uniform coats. Mr. Lamb himself confesses that for the new fashion of wearing clothing the mission ladies were largely responsible. This responsibility does not end only with the clothing, for is not the large increase of consumption and the ultimate extermination of the native population largely due to this false modesty? How much better would it be if they turned their attention to improve the hygienic condition under which the people live. Their houses are nothing but a hollow in the ground covered with a thatched roof. It is not to be wondered at that under these conditions diseases of all kinds are only too common among the natives, and while with one hand the medical mission do their best to cure, with the other fresh seeds are sown in a soil only too ready to receive them. J. E.-P.

England: Archæology. **Mortimer.**

Forty Years' Researches in British and Saxon Burial-Mounds of East Yorkshire. By J. R. Mortimer. With over 1,000 illustrations from drawings by Agnes Mortimer. London: A. Brown & Sons, 1905. Pp. lxxxvi + 452. 30 × 20 cm. **86**

The area dealt with in this imposing volume comprises 75 square miles of the East Riding, and the author has been careful to exclude—at least from the body of the work—anything but local matter. There is, happily, in Yorkshire ample scope for intensive culture of this kind; though the reader is taken further afield in the introduction, no claim is made to deal in detail with any district but the mid-Wolds. Comparison is inevitable with *British Barrows*, the volume in which Canon Greenwell dealt with a neighbouring area, and on which Mr. Mortimer has largely drawn, with due acknowledgments. The two works read in conjunction not only reveal the pre-history of what was

evidently an important centre of population, but render visible the darkness that overhangs the early periods of most other parts of Britain and Ireland.

Of special interest from the anthropological point of view is the barrow called (somewhat redundantly) Howe Hill at Duggleby, belonging to the Towthorpe group. The mound was about 125 feet in diameter at the base, the flat top being 47 feet across, and the height about 20 feet, originally, perhaps, 10 feet more. A peculiar feature was an inner dome of Kimmeridge clay about 1 foot thick, which sealed up a number of burnt and unburnt burials, the latter being mostly on a lower plane and in or near a grave cut below the ground level. Over fifty cremated interments were found below the clay dome, and probably many more remain in the unexplored part of the mound, but Dr. Garson, who reported on the osseous remains, regrets that no pieces of cremated bone were preserved, as it might have been possible to determine whether they were human or belonged to domestic or other animals. The cephalic index of the skeletons ranged from 65·5 to 79·6, five of the crania being hyperdolichocephalic, but the stature showed clearly that the subjects belonged to the Long Barrow race, while the hemispherical bowl found with the primary interments is of neolithic type. Mr. Mortimer rightly lays stress on this abnormal discovery of long-headed people in a round barrow, but his statement (p. lxxviii) that certain long-headed subjects exceeded in stature others with round (short) heads in proportion to the difference of 1 inch in the femoral bone is quite opposed to the expert finding (p. 32), the Round Barrow skeletons in *Crania Britannica* having an advantage of nearly 4 inches.

By his repeated discoveries of both kinds of skulls in the round barrows of his district, the author is led to reverse the general verdict, and to assign the long barrows with their long-headed occupants to a later period. It is indeed strange to find undoubted signs of fire in the long barrows of Yorkshire, and the process of cremation, according to Canon Greenwell, was peculiar and elaborate; but the absence of cinerary urns and other sepulchral ware is an argument against their erection in the late Bronze Age. Mr. Mortimer himself remarks (p. 41) that if the deposits of burnt bones in Howe Hill were not the remains of cremated attendants, they may have been those of prisoners-of-war; and the fragmentary human bones often found partially roasted may be the remnants of cannibal feasting at the tomb.

In this connection may be mentioned the frequent discovery by Mr. Mortimer of stray portions of human bodies that had evidently been buried where found before the flesh had wasted from the bones. Another surprising find was a calvarium containing fragmentary human bones, among them being six lower jaws; similar finds in the valley of the Petit-Morin (Marne) have been recorded by Baron de Baye.

The author asks, where are the burials of the later Bronze Age? Cremation seems to have been characteristic of that stage, and some light is thrown on the question by a recent discovery at Colchester. One of two cylindrical cinerary urns contained an iron spear-head very like Fig. 474, and these interments may be taken as typical of the latest Bronze period. The belief that chariots have been but rarely found in France is surely mistaken, and the use of the term buckle to describe a penannular brooch like Fig. 486 is misleading. Coral is a much more likely material than rubies to ornament the Grimthorpe sword, which can hardly be recognised from the illustration; and the bone object (Fig. 727) is more probably a "core" from which bone pins or needles have been cut (as in the French cave at Bruniquel) than "an instrument for netting or weaving."

Misprints and incorrect references are not infrequent, especially towards the end of the book, but much more could be excused in a book so profusely and satisfactorily illustrated. The inclusion of both prehistoric and Anglo-Saxon relics on several plates might perhaps have been avoided, but all are very welcome and most of them are now published for the first time. The diagrams showing vertical sections of several barrows are an important addition to the text. Mr. Mortimer has been fortunate in securing such an important

collection on scientific lines, but he and those who have assisted him are specially to be congratulated on having rendered a signal service to archæology by publishing the results of forty years' researches. R. A. S.

Egypt: Archæology. Seton-Karr.

Fayoom Flint Implements. By H. W. Seton-Karr. 28 × 15 cm. **87**

This is a useful collection of drawings, mostly in outline, of the flint implements found by Mr. Seton-Karr in the Fayûm. They appear to occur on any ground in that vicinity which is devoid of sedimentary deposit such as is found on the ancient lake-bottom, or of super-imposed material from cliffs or sand-drift, or the weathering away of strata; in fact, they are found on summits of undulations where the prevalent north wind keeps the sand from settling, and especially on the north side of such undulations. It may be noted that some of the specimens present a very beautiful polish, apparently due to the influence of blown sand. Mr. Seton-Karr's commendable generosity has provided a large number of museums with examples of the finds described in this pamphlet. They can thus themselves be studied by those interested in the subject of stone implements, but the pamphlet is a most useful note-book of the different forms. The writer describes a peculiar knife, of which all the specimens are in the Cairo Museum. This he calls the "Fayum fish-scaling knife," and describes it as being a shapeless, double-pointed knife, with concave angles in the circumference for the purpose of scaling fish. It is to be regretted that as there are no examples of this outside Cairo, it is not figured in this pamphlet. He also describes an instrument which he believes to be an adze, and one used for hollowing out canoes, and speaks of it as hitherto unknown to science. From the drawing, however, it would not appear that this differs in any important characteristics from the adze-heads found, for example, in the Thames. The only regret that one has about this pamphlet is that it is so published as to be very inaccessible to most workers, for it bears no name of printer or publisher, nor an indication of where it appeared or may be obtained. This is a pity, for many persons would be glad to make themselves possessed of it. BERTRAM C. A. WINDLE.

Physical Anthropology. v. Luschan.

Hautfarbentafel. Constructed according to the directions of Professor von Luschan, by Puhl and Wagner, Rixdorf. **88**

A specimen of this scale for the estimation of skin pigmentation has been presented to the Institute by Professor von Luschan, who has been engaged in perfecting it for more than twenty years. It is a handy tablet in a metal case, and contains a colour scale of thirty-five degrees, six for anæmic Europeans, the remainder for all degrees of pigmentation of normal individuals, European or otherwise. Professor von Luschan is to be congratulated on the successful result of his efforts. It is to be hoped that the scale will come into general use.

It will, perhaps, be desirable to add to the instrument some means of covering up all the colours save the one in actual use; this would at any rate assist the unpractised observer. Perhaps, too, a few more dark shades would have been useful for Africa, a blue-black in particular. But these are very minor points. More serious is a certain tendency to striation in some of the opaque glasses which constitute the scale. This is very conspicuous in Nos. 27 and 32 of the copy before me, and would to some extent interfere with the reliability of the comparative results of different scales. However this may be, the scale is a great advance on anything hitherto available, and anthropology owes a debt of gratitude to Professor von Luschan for his unwearied efforts. If it were possible to come to an agreement as to the portion of the body to be selected for determination of pigmentation, and ensure that all observers received directions on this point, comparison of results would be much facilitated. Possibly a caution as to cleanliness of the skin would be desirable. N. W. THOMAS.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

PAINTING ON BARK FROM THE AIRD RIVER,
BRITISH NEW GUINEA.

ORIGINAL ARTICLES.

New Guinea. With Plate L. Seligmann.

Note on a Painting on Bark from the Aird River Delta, British New Guinea. *By C. G. Seligmann, M.B.* **89**

Among a number of specimens bequeathed to the Daniels Expedition by the late Mr. C. Robinson, Acting Governor of British New Guinea, was that illustrated in Plate L. This specimen, now in the British Museum, consists of a portion of the lower extremity of the frond of a sago palm, on which is roughly painted in red ochre a number of figures. The only fact I was able to ascertain was that the specimen was collected in its present torn condition at Goaribari in the Aird River delta; but little can be said, and that of the least importance, concerning the painted figures; but their Australian appearance may be noted. The ten figures arranged in series along one edge of the frond, within the straight line which runs the length of that edge, probably represent men. That the ten figures less regularly disposed towards the other edge of the frond also represent the male human figure seems clear from the fact that each figure, besides presenting the appropriate genitalia, wears at the waist behind what is almost certainly a dancing ornament. This is probably the well-known ornament made of cassowary feathers and mimicking a tail, which is common in the Fly delta and throughout the greater part of the western extremity of the possession. It may be guessed that the elongation of the head of each individual represents some feather head-dress, so that probably the figures are dancing or moving in ceremonial procession, but it is certainly not clear that the objects in the hands of these ten figures are drums. Coming to the three objects painted between the feet of the dancing figures and the straight line, the largest of these may perhaps represent a human figure and not a kangaroo as it at first sight suggests. If this view be correct, the prominence below the figure's left elbow may perhaps represent the small bag—often a net in other districts—in which a man carries his most cherished trifles. I can offer no suggestion as to the nature of the two lower and more faintly shown figures. The length of the longest edge of the sago frond is 80 cm.

C. G. SELIGMANN.

Tierra del Fuego: Tatu. Ling Roth.

Tatu in Tierra del Fuego. *By H. Ling Roth.* **90**

A short time ago while perusing Sydney Parkinson's Journal, entitled *A Voyage to the South Seas*, London, 1773, my attention was arrested by a statement on page 8 relating to the aborigines of Tierra del Fuego, which reads as follows: "Many of both sexes were painted with white, red and brown colours, in different parts of their bodies, and had also various dotted lines pricked on their faces." In connection with this statement there are two sketchy portraits of these aborigines showing the positions of what are evidently meant to be the pricked lines. It is strange that neither in Cook nor Banks can I find any reference to this pricking or tatuing. Cook (Wharton's Edition, p. 37) simply says of the natives that "they paint their bodies in streaks, mostly red and black"; and Banks (*Journal*, Lond. 1896, p. 59) says "they paint their faces in horizontal lines just under their eyes and sometimes make the whole region round their eyes white, but these marks are so much varied that no two we saw were alike, &c." J. R. Forster remarks on the fact that the Fuegans use some colouring matter on their faces (*Observations*, Lond. 1778, p. 591). Wilkes tells us (I., p. 121) they mark their faces vertically with charcoal. Other travellers equally observant, such as Darwin, for instance, refer to the bedaubing of their faces and bodies (*Journal*, Ch. X., pp. 225 and 234, Ed. 1890) with white, black, and red paint. Weddell (*Voyage to the South Pole*, Lond. 1827, pp. 152 and 153) speaks of their colouring: "The women had changed the hue of their countenances from red

to jet black, and the men were decorated with red and white streaks running horizontally across the face." The horizontal streaks of paint mentioned by Banks and Weddell are to a certain extent depicted in one of the portraits (plate VII.) of the natives published by Hyades and Deniker (*Mission Scientifique du Cap Horn*, 1882–83, Vol. VII.), where the horizontal lines run right across the face and nose like a Roman road over a hill. Parkinson shows two horizontal (? tatued) bands across the nose only, all others being vertical. On plate XIV Hyades and Deniker show another pattern, in which two horizontal white paint lines run from the temples to the outer corners of the eyes and join the two inner corners of the eyes, the rest of the lines are all vertical, similar to the rest of Parkinson's lines. Other travellers, mostly of less note, refer frequently to the painted streaks, but none, in so far as I can ascertain, beyond Parkinson has stated that the natives tatu in the real sense of the word. On questioning Mr. W. S. Barclay, a resident of many years in Tierra del Fuego, on this subject he kindly writes me as follows :—

"None of the Fuegan races, or, as far as I know, the Patagonians, or even the tribes who inhabit the hardwood forests in the north of Argentina, use any tatoo marks

FIGS. 1 AND 2.—PHOTOGRAPHIC REPRODUCTION OF THE PORTRAITS OF TWO FUEGANS DRAWN BY SYDNEY PARKINSON FROM THE ORIGINALS IN THE BRITISH MUSEUM.

whatsoever. Neither have the Fuegans any scars, burnt or raised, which may be taken to interpret a fixed idea of adornment, or with reference to any totem of tribal unity. The Ona women when they are mourning take sharp stones or shells and score their breasts and arms till blood runs, and these scars are often permanent. But the men, whose mourning is less formal and a good deal more genuine, do not thus disfigure themselves. They tonsure the head, but leave the wakeing to the women. Each Ona Indian carries as an indispensable outfit a stock of clay pigments in some four colours, red, yellow, white, and black, which they obtain from different clays and their compounds with ashes, grease, &c. These are necessary to their Clockten ceremonies and also for stalking. They paint their faces in an arbitrary fashion ; for instance, when a man is feeling pretty savage he makes himself ugly with black and red paint ; in his softer moments he inclines to white and yellow : a good deal of the time they wear no paint at all, only grease. You will remember that in his only encounter with the Onas at Good Success Bay, Darwin in his journal says that they looked like the devils out of

the *Freischütz*. There is no connection between the scars which they may bear, self-inflicted or otherwise, with these paintings; yet it may have well happened that Mr. Parkinson, who afterwards saw a great many tatooed races and who may not have been able to examine, or at least to actually handle, the Fuegans whom he saw (who were probably Yaghans) confused their paint marks with other foreign methods of adornment. The Yaghans have, or rather had, for they are now quite tame, still less paint than the Onas and according to Mr. Lawrence, a missionary who had worked for thirty years with the Bridges in the Beagle Channel, very seldom used it, except during certain uncouth dances which he described, which they indulged in after an exceptionally good feed, with a good supply of food also in sight."

This is of course sufficient evidence as to present day custom, but not conclusive as to the past. The existence of a tatu as a high art such as it existed amongst the South Sea Islanders can naturally only be co-existent with considerable advance in culture. But the art must have a beginning, and we would probably not be far out in contending that the Fuegans may possibly have indulged in such a world-wide custom. They were perhaps on somewhat the same level of culture as the present day Sakais, some of whom, Mr. Leonard Wray writes me, tatu themselves with a thorn, but that the custom is dying out. It might have died out amongst the natives of Tierra del Fuego. That Wilkes found their neighbours, the Patagonians, with streak-painted faces (Vol. I., plate opposite p. 93), or that the Patagonian women tatu their forearms at the present day does not affect the question, nor do I think that the present day facial-coloured streaks are a survival of past tatuing, for in so far as my studies have led me I have found no connection at all between painting and tatuing. Sydney Parkinson died at sea on the return voyage before reaching the Cape of Good Hope, and there was a sad dispute between Banks and his brother, Stanfield Parkinson, as to the custody of his, Sydney Parkinson's, journal. Stanfield Parkinson acknowledges not to have had the actual journal with which to compile the publication which was prepared from other sheets of his brother's MSS. obtained from members of the ship's company. It is therefore possible that the words from which we infer tatuing is meant, namely, "various dotted lines pricked on their faces," are not Sydney Parkinson's own, and that his brother with the tatu of the South Sea Islanders in his mind's eye inferred the prickings from the dotted lines on the drawing. On the other hand Sydney Parkinson appears to have been a fairly correct delineator and as such he is not likely to have put dots where streaks existed. The portraits of two Fuegans (Figs. 1 and 2) here reproduced from the original drawings of Sydney Parkinson in the British Museum, certainly give one the impression that the faces were tatued.

FIG. 3.—PORTRAIT OF A PATAGONIAN. AFTER WILKES. VOL. I., PLATE OPPOSITE PAGE 93.

HY. LING ROTH.

Archæology: Eoliths. Kendall.

Eoliths and Pseudo-Eoliths. *By the Rev. H. G. O. Kendall, M.A.* **91**

The discovery of mechanically-made "pseudo-eoliths" by the French savants is of great interest and importance to all students of the eolithic question, whatever be their predilections, as Mr. Dalton has pointed out. There are two ways of receiving the news, the one as a condemnation of all eoliths, the other as a surer guide to the perception of the border line which divides "human" from "natural" chipped flints than we have yet, perhaps, had. The former manner begs several questions and leads

to stagnation of knowledge ; the latter has the advantage of the medium of two extremes, where, as the old saying has it, truth is always found.

M. A. Gaudrey is reported to have stated "that the argument from eoliths to the "existence of tertiary man now falls to the ground." The other French savants tell us that, since the Mantes discovery, the hypothesis of human agency in the case of plateau flints becomes superfluous.

Assuming, for the sake of argument, that all those eoliths which have merely trimmed edges are now discredited, the fact that man lived at the same time that these stones were trimmed by natural causes (according to the assumption) rests still on abundantly sufficient proof. For there occur on the hill tops, together with the trimmed eoliths, flints of similar condition and equally connected with the plateau drift, the human workmanship of which is doubted by no one. These, though found on the plateaux, seem to be generally known as "palæolithic implements," no doubt because implements had already been recognised in the river gravels similar in condition and workmanship. Incidentally, the question may be asked, why have not these implements been termed "eolithic" implements, seeing that they are of the same age as the rude trimmed tools? In the valley gravels they are evidently not in their original homes, but have been swept down from the high ground. Since the terms eolithic and palæolithic refer of themselves to man's handiwork in stone of different periods rather than of different types, some confusion of ideas might have been avoided by classifying together stones admittedly of one age. But the main point for our present purpose is that these abraded implements from gravel on the hill tops prove the existence of man at a time anterior to the configuration of the country in the palæolithic age. The existence of man of the plateau drift is not, therefore, affected by the rejection of all merely trimmed eolithic tools.

But, indeed, it were most unwise to eliminate all these from the category of hand-worked flints on account of a single discovery such as this at Mantes.

In the first place, assuming that the trimming on the plateau flints and on the machine-made "eoliths" is alike, is there any reason why man's feeblest and Nature's best efforts should not frequently and strongly resemble one another? In this case a number of so-called eoliths must, no doubt, be relegated to a doubtful class. But there would still remain a large quantity of stones which from the amount and superior nature of the trimming must be regarded as in all probability of human manufacture.

On a good palæolithic river site there will be found, together with implements, flakes, and cores, a number of punches, hammer stones, flakes rudely trimmed, and trimmed pieces of flint. A considerable experience in searching and digging, both in one of those pits where implements are most numerous, and in others where they are only occasionally found, goes to prove that these said trimmed pieces, &c. abound or are scarce according as implements and flakes are plentiful or the reverse. Nay, more—in the same pit in which implements are very common in one species of gravel and comparatively scarce in another, the trimmed pieces are plentiful in the former and much less common in the latter. Now, many of these trimmed pieces, though of palæolithic age (*i.e.*, of the same condition, circumstances, &c., as the palæolithic implements) are often of what is known as eolithic type. In some cases manifestly "human" flakes have been trimmed, in others, mere pieces. The trimming is such as probably the most sceptical would not deny to be the work of man. In judging trimmed stones of eolithic age these facts, in things palæolithic, must be set, on behalf of eolithic trimmed pieces, against the Mantes discovery. Eventually a balance will be struck between the present conflicting ideas. Is it presumptuous to suggest that observation aided by intuition has enabled some to come near the striking of that balance already? There are certain pits apparently of a glacial age, where the most diligent search may be made with heart-rending results to the enthusiast. Now and then he finds a flake with a bulb; yet it is

not a satisfying flake. Then he finds a flint which he thinks may have been trimmed. He throws it away, afterwards picks it up again, and finally discards it altogether; and further search brings to light nothing that is definitely "human" even to one who accepts the veriest "rudes." Careful study shows a difference, easier to perceive than to describe, between these natural products and man's handiwork. In such a pit, at any rate in many such, eoliths proper may be looked for in vain.

Now, M. Boule's illustrations in his excellent article in *L'Anthropologie* seem to resemble, on the whole, the naturally stricken flints from such pits, as those above mentioned, rather than eoliths. There would appear to be a clumsiness in the general style and a depth of hollow in each space whence a chip has been removed, which is not to be found on, at any rate, many eoliths. Moreover, some of the forms of eoliths are not represented at all, and most of those which do appear are very badly represented. Where are the "double scrapers," the ordinary scrapers with straight but slanting edge, and the "crescent-shaped scrapers" (which are so often of set form) of Prestwich? There is no "hollow-end scraper" (of Harrison) and the so-called (horse-shoe) "scraper" in Fig. 6 would, to judge by the illustration, be a poor thing to take home to one's cabinet. The manner of such chippings as there are upon the stone does not seem to suggest anything either palæolithic or eolithic. In fine, these illustrations to one who looked forward to something which should produce a combat royal between the original eoliths and the machine-made are a distinct disappointment. As a means of narrowing to greater exactness the border line between the worst eoliths and the best of Nature's work they may prove to be of much value.

H. G. O. KENDALL.

Archæology: Eoliths. Larkby.

Machine-made Eoliths. *By J. Russell Larkby.* 92

It is gratifying to learn that an attempt has been made to demonstrate the natural origin of eoliths, for up to the present time our opponents have restricted themselves to somewhat general terms in their rejection of these forms. The claim lodged by M. André Lavilles, Professor M. Boule, M. E. Cartailhac, and Dr. H. Obermaier, has the appearance of a serious objection against the authenticity of eolithic implements; but there are arguments against the validity of the deductions drawn from the pseudo-eoliths of Mantes. It is desirable that proof should be furnished that the conditions under which these pseudo-eoliths were formed resemble in any way the natural process by which the high-level or any other gravels were laid down. In the centrifugal process the flints and containing chalk were confined to a limited space and given a rotary motion not known to occur under natural conditions. We are told that as a result of this motion the flints released from the chalk rested as a bank of gravel at the bottom of the receiver; but this deposit in no way resembles the eolithic gravels of south-east England, for it has been shown by excavations on the crest of the North Downs that these gravels are of a more or less sandy or clayey nature and that implements occur in them in both rolled and unabraded conditions. The presence of the sandy and clayey matrix is indicative of slowly moving water; yet if the deposit was subjected to a rotary motion, at all resembling the Mantes process, by which the flints were chipped naturally, then the occurrence of rolled and unabraded flints is clearly contradictory. It is unlikely that a stream engaged in depositing silt would at the same time bring down and deposit flints in such a variety of conditions as those existing in the plateau gravels. A careful scrutiny of a number of eoliths will make it clear that many have undergone a minimum of rough treatment, for not only are their edges preserved in a remarkable manner when we consider their antiquity, but the flatter surfaces are practically devoid of those incipient cones of percussion so characteristic of deposits of abraded gravels. But if, in the Mantes process the flints were "exposed to every conceivable kind of pressure and shock," the eolithic forms

were in nearly all cases exposed to blows delivered *from one direction only and with a like intensity*. The significance of this fact must not be overlooked, for if any weight attaches to arguments founded on the Mantes specimens, then the true eoliths were whirled round by an entirely hypothetical movement, and continually retained one position by which extraordinary process the definite chipping into classifiable types was achieved; moreover, this process was carried on only long enough to produce a series of points when with a remarkable coincidence of movement they gravitated to the bottom never to again come under a similar action. In other cases the flints were chipped in alternate directions with such precision and regularity that the student is compelled to express his admiration of the orderly and discriminating processes of Nature. But the most astounding feature in the case lies in the fact that eolithic forms are characteristic of high-level gravels. In undoubtedly post-glacial gravels where there is evidence of increased fluviatile action, and therefore greater abrasion, these eolithic forms occur sparingly and even then only as derivatives from older gravels; it is in the results of this greater fluviatile action that we might well expect to find some evidence comparable with the Mantes forms. How, then, is the general absence or presence of eolithic forms from and in certain gravels to be accounted for? There is one logical explanation; it is that man improved upon and ultimately abandoned the cruder forms as his skill in flint-knapping advanced, hence the later the gravel the finer is the character of the enclosed implements. There is also an illogical explanation to which we are committed if we accept the Mantes forms as deciding the origin of eoliths; it is that of a change in the *modus operandi* of natural agents by which forms present in early gravels and attributed to natural causes were not repeated by those natural agents in later and lower deposits. But if it is not demonstrable that an analogy exists between the Mantes process and the conditions under which the plateau gravels were laid down, it is equally clear that no parallelism exists between the pseudo and true eoliths. A recent examination of the results of the washing process as carried on by Messrs. H. Tyrer and Co., Ltd., at St. Mary Cray, Kent, produced some interesting evidence. It was found that although in the case of true eoliths the agent responsible for their production confined itself almost entirely to one angle of chipping for each implement, the undiscriminating separater gave all the flints an impartial attention in the angle of fracture; as a result of this action the flints were reduced to very imperfectly-formed pebbles, but the softer chalk fragments were reduced to completely rounded forms, thus showing the relation between form and hardness. The definitely chipped but unabraded pseudo-eolith was entirely absent from the *débris* in the receiver; in striking contradistinction to this there are forms from the plateau gravels showing definitely chipped edges, but no clear signs of rolling.

A careful measurement of the angle of chipping reveals a difference of vastly greater importance than mere form coincidence, however seductive the latter may appear. In true eoliths the angle of chipping rarely exceeds 72° or falls below 45°, and as a rule one general angle of chipping is retained for each implement; but in the case of the pseudo-eoliths the angle of fracture even on one flint often varies from 25° to 90°. This significant discrepancy must be explained away in any theory of the natural origin of worked stones from plateau gravels. J. RUSSELL LARKBY.

Africa, South: Kitchen Middens. Colson.

The Port Nolloth Kitchen Middens. *By R. Colson, communicated by the Secretary.* **93**

The kitchen middens on the west coast of South Africa extend, I believe, from Walfisch Bay to the Cape Peninsula.

I have personally examined those in the vicinity of Port Nolloth and one on the Cape Flats. In both localities the contents of the middens are the same, except,

as is natural, that those on the rocky seashore at Port Nolloth contain enormous quantities of shells, chiefly limpet, while in the midden on the Cape Flats, situated about eight miles from the sandy coast of Table Bay, the shells are not present to the same extent.

The middens contain, besides the shells, large quantities of bones of the smaller carnivoræ, as well as those of herbivorous animals, and ostrich egg shell also occurs. The chipped implements such as scrapers and sharp flakes are usually made of chert and are of a very rude character, but, as very well worked specimens are found elsewhere, the few obtained by me may be discarded failures.

FIG. 1.—CONICAL POT.

Grinding stones and querns, which are common, are simply any suitable pebbles and slabs of stone. At Port Nolloth I found two bone awls, large quantities of pot-sherds, the greater portion of a small shallow pot, and an almost complete pot about 9 inches in height conical in shape.

Both at Port Nolloth and on the Cape Flats I found beads made from ostrich egg shell. The complete bead is circular, varying in diameter from $\frac{1}{8}$ inch to $\frac{1}{4}$ inch with the hole in the centre. From some unfinished specimens I found, the method of manufacture appears to have been first to drill the hole in a chip of shell and using that as a centre, probably with a stick through it, afterwards to grind the chip into shape. In the Cape Museum there is an apron made by stringing these beads together, the strung beads forming a broad belt with pendant loops. This apron was, I believe, obtained from German South-west Africa, and it might be that the race using it is the same as, or allied to, the now extinct dwellers in these Cape Colonial middens. The latter race is spoken of by Cape anthropologists as "Strandloopers," but whether they existed at the time of the early Dutch occupation I do not know.

The large conical pot I found buried in an upright position at surface level on a midden. The burial was probably due to the drifting of sand from beneath it, after which a change of wind would recover it. It was about half full of magnetic iron sand, the remaining space being filled with ordinary white sand that had drifted in. This iron sand is washed together in many places along the beach by the action of the tide; the only point of interest is what could have been the object of the savage in collecting it. I suggest it may have been used for tempering the pot clay in burning the ware.

FIG. 2.—GROUP OF STONES, PORT NOLLOTH.

In a midden about a mile to the south of Port Nolloth I found a skull of very low type and other portions of the skeleton. These together with the large pot are now in the Cape Museum. This midden, like all the others near Port Nolloth, is about thirty feet above the beach level, on the top of a line of sand dunes quite close to the sea.

About 200 yards north of this encampment are the groups of stones, about fifteen groups in all, two typical examples of which are shown in the photographs. Other isolated groups occur along the coast, but those above mentioned could all be included in a circle of 150 yards, one or two groups being situated barely above extreme high tide mark.

Each group is distinct from and apparently unconnected with the others; each is composed of two parallel lines of stones varying in number from five to eight on either side, about 18 inches separating the lines. The stones are natural slabs, which occur in numbers among the beach rocks, and are about 3 feet in length, buried to about half their length. In one photograph (Fig. 3) the spade was placed close to the group for comparison.

With Mr. Garwood Alston, to whom I am indebted for the photographs, and some other gentlemen I assisted to excavate six of these groups. We dug a trench along one side of each group till an undisturbed stratum was reached. In four cases this stratum was indurated sand, and in the other two, which were close to the beach, an old beach level. The depth in every case was approximately 3 feet. The side of the trench was then pared back till the group was removed.

FIG. 3.—GROUP OF STONES, PORT NOLLOTH.

Nothing whatever was found under any of the groups, nor could the natives give any information regarding them.

A curious point is that with scarcely an exception the parallel lines lie north and south.

As the groups have clearly no sepulchral object, and cannot from their formation be of any use as game traps, it is possible they may have some religious significance, though I have never heard of any tribe in South Africa erecting stones in this manner for that purpose.

R. COLSON.

Africa, East. **Salkeld.**

Notes on the Boni Hunters of Jubaland. *By Captain R. E. Salkeld.* **94**
(Published by the courtesy of the Trustees of the British Museum.)

The Waboni are the hunters of Jubaland; they live in no settled habitations, but follow game. They are capable of extraordinary feats of endurance. From a Government point of view they are the only elephant killers, and if they could be communicated with and their confidence gained they would form the best scouts in the country. They are, however, very shy, and much afraid of their Somali masters.

They have three divisions:—

(A.) Bon Dhurrey. (B.) Bon Aleyli. (C.) Bon Boran.

(A.) Bon Dhurrey were the Boni of the country subject to the Werdey and Gallas. When the Werdey were conquered and driven back on the Tana by the Somalis their Boni followed them, and now inhabit the coast, and, it is said, the neighbourhood of the Tana river. They have fairly close relations with the Bajuns, who supply them with cloth, &c. and with whom they trade their ivory. They are the most civilised of the various Boni, having, in fact, a settlement and shambas at Anola at the head of Tovai creek.

(B.) Boni Aleyli are probably the oldest of the three divisions; they inhabit the forests bordering the River Juba, and owe no allegiance such as other Boni do. They have certainly one village, perhaps more. They are admitted to be much more accomplished in Boni medicine than the other two sections, and are credited with a cure for gundi (tetse fly) bite; this has been explained, but hitherto no opportunity has offered of testing the medicine. They are also supposed to possess an antidote against snake-bite and wounds of poisoned arrows. The latter has been explained, but again there has hitherto been no opportunity of trying it.

(C.) The Bon Boran or Bon Hegan are probably the largest section of the three and are subject to the Somalis. Families and their offspring being the property of Somalis are left by them in their wills. They give to their masters, when they kill an elephant, the tusk on the side which the elephant falls; the other is their own property. There is no tribal organisation amongst these people, their disputes being settled by their old men. There is a man called Weyo Arrey amongst this section who considers himself chief of the Bon Boran, but no Boni considers that he is.

The Somalis are not unkind to these people; on the one hand the Boni provide ivory and the hides of giraffe and oryx for shields, the most valuable local products; on the other the Somalis give them meat, milk, and generally look after them and act as *vakil* for them. The Bon Boran followed the Somalis into this country when it was invaded. In those days there were many Borana living in Jubaland who were very friendly with the Boni; the Somalis joined with the Borana to conquer the Gallas and then turned on the Borana and massacred them; the Boni, however, took to their new masters.

The following are some of their chief customs, and are common to all sections of Boni:—

A Boni may marry any woman of his race; it is not necessary to obtain the consent of the parents, but it is usual to give them presents, though not necessary. One curious custom is that there is no divorce among these people, all the children of one woman, by whatever father, are the property of the woman's original husband if alive; if dead, of his brother.

When a lad starts hunting, at about sixteen or seventeen, and kills his first elephant, he hands over both tusks to his father and a feast is made, and with much singing and eating he is hailed as a man.

When a Boni dies he is buried lying on his side as he sleeps, his head to the north, his bow, arrows, and spear are buried with him, but economy decides that the iron heads of his arrows and spear should be kept by his relatives.

The great Boni accomplishment is, of course, the making of poison for their arrows. This poison is made from a tree called, in Northern Somaliland, Gadwayiyu. It grows commonly there, also in the hinterland of the Benadir, and in the northern parts of the Jubaland. The recipe is this: Take a piece of wood, bark it, and shred the wood into splinters; soak bark and wood for twelve hours. It is now necessary, if the poison is being made for a white man, to kill a goat to feed the cooks. The cooks having been fed, the cooking proceeds. The wood and bark are now boiled for twelve hours, fresh water being constantly added. Towards the end of the boiling it is necessary to skim the scum of the brew, and here knowledge and experience come in. The final result is a thick black treacle-like substance, which is put on the arrows, on the detachable head behind the barb. The poison is strong. In an experiment tried, a goat was chosen, a small incision made in its shoulder and the poison inserted; death ensued in just over five minutes. The symptoms were those of strychnine poisoning, so I am informed.

In Northern Somaliland the subject tribes are Tomal, Yibr, and Midgaan. The Tomal are the iron workers; the Yibr the wood and leather workers and astrologers;

the Midgaan the hunters. These are supplemented in Southern Somaliland by the Waboni, and, as a matter of fact, the above-mentioned three tribes do not hold the same subordinate position as they do in Northern Somaliland. When dealing with Waboni it is necessary to be prepared for many disappointments, for they have a habit of walking off into the bush and disappearing; tobacco, cloth and, above all, food, especially meat, should be used when paying them.

These people are not without interest. When their confidence has been gained it will be found that, besides being extraordinarily good hunters and trackers, they are very good practical naturalists and botanists; they have many interesting customs and tales, very often tell the truth, and would make the finest scouts imaginable.

These notes, of course, require supplementing as opportunity occurs.

R. E. SALKELD.

Hungary. Beddoe.

Hungarian Physiognomy. *By John Beddoe, M.D., F.R.S.*

95.

A curious controversy has been afoot lately in Hungary respecting the physical type of the Magyars, the anthropologists concerned being the late Dr. Johann Janko, C. Von Ujfalvy, Professor Von Török, Dr. Willibald Semeyer, and Dr. Otto Herman. It will be noted that the two latter gentlemen bear German names; it is well-known that the Magyar nationality is growing by the absorption of German as well as of Slavonic and other elements.

So far back as the year 1900 Dr. Janko published what was intended to be the first of a series of papers on the physical types of his countrymen, which his lamented death at an early age prevented him from carrying any further. He chose to begin with the people dwelling on or near the Lake Balaton, who are regarded by many as tolerably pure Magyars, though their geographical position, in comparatively low ground* not very remote from the German and Slovanian frontiers, might lead one to have a little doubt on that point.

Forty-eight specimens of the adult male natives were photographed, every one in two positions, front face and absolute, or nearly absolute, profile; and in every case the stature (1674.5),† age, occupation, nose form, circumference (aver. 550), length and breadth of the head (184.2 and 156), and cephalic index (aver. 84.5), were given. A few of the men bear surnames indicating Slavish (Toth, Takács, Bogdan), or German (Német, Oswald) admixture; and Dr. Otto Herman, in criticising Janko's work, says that the owners of these names should have been eliminated. Perhaps they should have been so; for they cannot, of course, have had an absolutely pure Magyar pedigree, whereas it is just within the limits of possibility that men named, *e.g.*, Nagy or Jobbagy, may have had one. Janko confined himself to people whose families had been esteemed to be Magyars since the eighteenth century; but his limit was not sufficiently narrow, for some of his Slavish or German-named men show indications of their respective origins. Still, though surnames may fairly be used as evidence of ethnological mixture in a population, they are of little use as regards the predominating strain in individuals. I know several men called White, but every one of them is of dark complexion.

Janko's paper, which was published officially from the National Museum at Budapest, gave rise to much controversy. Von Ujfalvy, whose lamented death followed that of Janko, was very vehement in his condemnation of the latter's photographs, accusing Janko of having chosen the ugliest men from the lowest caste

* There are hills around the lake, but of no very great height.

† This is decidedly above the mean of the Magyars, or of any other Hungarian race.

to represent the noble Magyar race. The sculptor Fadrasz affirmed that he must have ransacked the prisons of the Alföld (the central plain of Hungary) to find such countenances; and Aurelius von Török, the anthropologist, held and expressed similar views.

These utterances seem quite unwarranted. As Otto Herman himself allows, the originals of Janko's portraits were decent peasant farmers. And though most of these were of brachycephalic types, which to an English eye seem harsh and exaggerated, they have nothing of the criminal about them; and some, as 12, 22, and 26, are indeed rather handsome than otherwise; while others, ugly or not, are unquestionably typical and recall to me features that struck my eye when I was in Hungary many years ago.

Their great fault is that the photographs have been taken in a strong light, which has caused the subjects to incline their faces downwards and to contract their eyes and the surrounding muscles. Herman adds that the negatives have been much retouched, especially about the eyes, so as to darken the blue eyes and sometimes the light hair, out of recognition. This also is fact so far as eyes and hair are concerned; but not, I think, beyond them. Dr. Herman was at the pains of having several of Janko's subjects photographed again by a skilful artist in that line; and the peasants in white shirts and collars, with heads well set up, and so inclined as not to give the absolute crude profile, are certainly much improved in aspect. But I should have thought that in some cases there had been a little retouching. Herman seems to have a considerable knowledge of Hungarian history; and I therefore regret that he objects to my thinking Waitzen (Vacs) a good hunting-ground for Magyars; but I may say, firstly, that I was directed thither by good authority (Balassa, I believe, and Zsigmondy), and secondly, that I certainly found there some of his own favoured types, as well as of Janko's and Semeyer's Turko-Magyar ones.

The paper on Magyar anthropological types, published by Dr. Semeyer in 1903, would, I am sure, be extremely interesting if, like Dr. Janko, he had supplied a German translation thereof. It evidently contains a defence of his departed friend against the animadversions of Dr. Herman, which, however, being couched in the Magyar tongue, is to me unintelligible. Such is happily not the case with the illustrations, which include nine Turco-Magyars, ten Ugro-Magyars, three of what he considers a mixture of the two, five Roumanians, two Slovaks, two Germans, and two Armenians. Semeyer's Ugrian or Finnish Magyars are longer in head and lighter in complexion than his Turkish Magyars and more European in aspect. Several of them, Semeyer informs me, are Szeklers, of that gifted section of the Magyar nation who dwell in northern Transsylvania, and distinguish themselves by their intelligence and their fine spirit in religion as well as politics. As here depicted, they have not the heavy "jowl" which so frequently occurs in both Semeyer's and Herman's Magyar types, and which recals to my mind the Auvergnat type of France. The same feature is found in some of Semeyer's Oláh (Roumans), but with a quite different expression of countenance. Herman, no doubt rightly, lays great stress on the expression of the eye as a national characteristic. He says that of the Magyar is "free, open, self-conscious (*selbstbewusst*), "but indicates also quickness of passionate excitement (*leichte erregbarkeit*) the so-called strawfire."*

It is disappointing to find after all that in the view of Von Török and Herman the original Magyars, though numerous enough to perpetuate their language, were not in very large proportion to the pre-existing population, from whom they suppose the serfs or non-nobles to have descended. That population may have included besides Slavs,

* "The young man's wrath is like straw on fire
But like red-hot steel is the old man's ire." (*Scott.*)

the relics of the Sarmatians, Dacians, Sigynnæ*, Gepidæ, and Avars. Von Török thinks that even the noble caste was impure from the first, that some of the non-resisters among their new subjects were received by the Magyars into their nation and even into their nobility. Such lenity, however, seems rather improbable when we think of the character of ruthless ravagers which they earned during the century that succeeded their advent. If they are right we must look for true Magyar types, whether Ugrian or Turk, among the Klein-Adel, the small squires and gentry, and the still half-nomadic herdsmen of the Alföld, rather than among the agricultural peasantry.

Herman winds up with some examples of his idea of Magyar types; two of these are interesting, coming from the Alföld, and being supposed by him to resemble the human remains ascribed by Von Török to the period of Arpad, of the conquest. One of them is dolichocephalic and leptoprosopic, and might be seen any day at Hawick or Selkirk market: the other is a coarse platyrrhine brachycephal, like a low-class Savoyard. I do not recognise the Turk or Finn in either of them.

Clearly there is much yet to be done in this interesting field. I could wish that Semeyer would give us a batch of portraits from the Alföld. JOHN BEDDOE.

REVIEWS.

Psychology. **Thomas.**

Thought Transference. By Northcote W. Thomas, M.A. London: Moring, 1905. Pp. viii + 214. 19 × 13 cm. Price 7*s.* 6*d.* **96**

Crystal Gazing. By Northcote W. Thomas, M.A., with an introduction by Andrew Lang, M.A., LL.D. Same publisher, size and price. Pp. xlvii + 162.

Mr. N. W. Thomas has done useful service in producing two handy volumes: *Thought Transference* and *Crystal Gazing*, kindred subjects which have exercised the minds of those interested in psychical research from time immemorial. In the first-mentioned work Mr. Thomas gives the results of a large number of experiments relating to reading, through the mind of a second person, the colour, suit, and points of some unseen card, the shape of certain diagrams, and various other problems. The success of these, however, to judge by the statistical result, seems to be quite as much within the doctrine of chances as due to any element of telepathy, and it may be questioned whether what may be called the "set scenery" of these experiments and the rigid conditions under which they were conducted did not greatly militate against the ready inter-communication of thought of which there are so many authenticated instances, and which goes far to show that in order to obtain such inter-communication, not only must the minds of both active and passive agents be absolutely attuned to each other, but that thought transference is far more complete when spontaneous and not prearranged. Moreover, Mr. Thomas deals mainly with experiments with opposite sexes as the relative agents, which, considering the normal influence of man over woman, is hardly conclusive.

The book is very carefully written and contains much interesting matter besides the experiments to which we have alluded, and should be read as a prelude to the same author's *Crystal Gazing*, an admirable little encyclopædic work of which the value is enhanced by an introductory chapter by Mr. Andrew Lang. From an anthropological point of view the alleged seeing of visions in a glass globe, a pool of ink or water, a cloud of incense, or a mirror, has always been of considerable interest, as certain races—take the Scotch and Irish on our own shores—have unmistakably some inexplicable faculty of conceiving and materialising mental pictures of past, current and even future

* I cannot but think that the apparent identity of the race-names Sigynnæ and Zigeuner must be more than merely accidental.

events, which is totally absent in others. For instance, the chief "scryer" quoted by Mr. Lang is described as "Miss Angus," and it would be interesting to know how many of those authorities designated by the author under simple initials are of Scotch or Irish blood. Mr. Thomas gives an historical sketch of "serying," beginning, of course, with the cup in which the patriarch Joseph is said to have divined, and describes the various methods practised thoughout the world. Thus in New Zealand the Maori uses a drop of blood as his speculum, in Western Australia, the "flame of a burial fire," in South America, "Huille, the treasure seekers," look earnestly for the objects of their search into a smooth slab of black stone, and in Fiji the priests find out a thief by looking into a hole filled with water. Some Red Indian doctors make their patients prescribe for themselves "by the simple method of gazing into water wherein they saw pictures of "the things that would do them good"—an admirable form of suggestion. In Malacca they gaze in the flame of a candle—another method being to chew betel and "use the "coloured saliva in a metal cup or other vessel as a speculum."

Many other methods of serying are mentioned by Mr. Thomas, and it is noticeable that in a large number of cases a young girl or boy is chosen as the scryer, and this, as in the well-known story of the Egyptian diviner mentioned by Lane, undoubtedly lends itself to the theory of hypnotic suggestion—as only in very rare instances do the pictures seen in the crystal represent figures or scenes unknown to one or other of the persons present. Among the most interesting episodes Mr. Thomas cites is that of the late Sir Joseph Barnby. A "scryer" saw in the crystal Lady Barnby in a serge dress which her husband was unaware she possessed but one he had wished her to have. This she had procured unknown to him and wore under exceptional circumstances a few days later exactly as described by the scryer. Here the theory of telepathy between husband and wife, which exists in so many cases, may well be advanced. Mr. Thomas's book is concisely put together and contains a mass of well digested information condensed into a small space. T. H. J.

New Zealand. **Smith.**

Hawaiki: the Original Home of the Maori; with a Sketch of Polynesian History. By S. Percy Smith, F.R.G.S. Second edition; enlarged and mostly re-written. Christchurch, Wellington, and Dunedin, N.Z.; Melbourne and London: Whitcomb and Tombs, Ltd., 1904. Pp. 223, with map, figures, and folding tables. 18 × 12 cm. Price 6*s*. **97**

The substance of this work, which seeks to trace the origin and migrations of the Polynesian race, appeared originally in the *Journal of the Polynesian Society*—a society in New Zealand over which the author presides. The subject is treated mainly from the point of view of tradition. For ages it has been a special function of the priesthood to preserve the verbal records of the history and literature of the people, and as the office of priest is mostly hereditary the traditional lore has been handed down from father to son, generation after generation, and, it is alleged, with minute accuracy of detail. Mr. Percy Smith, who has been a student of Maori tradition for more than forty years, upholds its general trustworthiness, and administers a gentle rebuke to scientific men who are disposed to discredit such evidence. Those who possess the traditional knowledge are not disposed to impart it to strangers, and it needs some tact to secure their confidence. "Much of the old history of the Polynesians was looked "on as *tapu* (sacred), and its communication to those who could not share this feeling, "or would make improper use of it, would inevitably—in the belief of the old *tohungas* "(priests)—bring down disaster on the heads of the reciters." Valuing their pedigree highly, it was a principal part of their education to treasure it in memory and transmit it orally. It is difficult for those familiar with writing to realise the remarkable efforts of memory which could be accomplished. Mr. Smith took down from an old Maori

"the genealogical descent of all the members of his tribe, involving the recollection of over 700 names and going back for thirty-four generations." From such genealogical tables it is possible to fix rough dates in Polynesian history. The value of a generation has sometimes been taken according to the European standard at thirty years, but the author reduces the former estimates by reckoning twenty-five years as the average length of a Polynesian generation. The great migration to New Zealand is computed to have taken place twenty-one to twenty-two generations ago, or about the year 1350. It is now known that the fleet of canoes came immediately from Rarotonga, which seems to have been a stopping place from Tahiti. The author, during a visit to Rarotonga in 1897, obtained from a man believed to be ninety-six years of age, an account of the migration, which practically coincides with the well-known Maori traditions. It was thus found that the Rarotongans had a traditional knowledge of the New Zealand greenstone (*punamu*), which they called *toka-matie*, or "grass-stone" as also of the moa. The greenstone, or jade, was believed to be a fish of the sea.

Hawaiki, the ancient fatherland of the Maoris, is the subject of much traditional lore. The Polynesians in the course of their wanderings seem to have carried the word with them, and under various modifications it appears in many parts of Polynesia. Its wide distribution suggests its great antiquity, and in many islands it has come to be synonymous with the "Spirit Land."

Mr. Percy Smith holds that the ancestral home of the Polynesians, the original Hawaiki, was probably in India, whence they migrated down the Straits of Malacca to Sumatra, Java, Celebes, Ceram, and Gilolo, becoming, as they advanced, more and more a race of navigators. It is thought that recollection of their sojourn in Indonesia may be traced in certain traditions relating apparently to large apes, feline animals, snakes, and other reptiles. It seems, moreover, that Polynesian tradition includes reference to a light-coloured people with whom they may have come into contact in very ancient times.

Possibly some of the Polynesians never left the Archipelago. Most, however, passed to the northern part of New Guinea, where they came into contact with the Papuans. It is suggested that the country known in Rarotongan tradition as Enuakura, or the "land of red feathers," may, perhaps, have been New Guinea. In course of time they moved on to the Fiji group by way of New Britain and the Solomon Islands, spreading gradually thence to Samoa and Tonga. Several branches of the Polynesian race have preserved oral records of their migrations, that of the Marquesans being the most detailed. Becoming a great navigating and colonising people they spread over the Pacific, voyaging northwards to the Hawaiian Islands, eastwards to Easter Island, and southwards not only to New Zealand but, it is said, even to the Antarctic seas. The period of the great voyages of Ui-te-rangiora—the "Heroic period" of Polynesian history—was about the year 650. "Who after this," says Mr. Smith, "will deny to "the Polynesians the honour that is their due as skilful and daring navigators! Here "we find them boldly pushing out into the great unknown ocean in their frail canoes, "actuated by the same love of adventure and discovery that characterises our own "race."

F. W. R.

Archæology. Munro.

Archæology and False Antiquities. By Robert Munro. "The Antiquary's Books," edited by Dr. J. Charles Cox. London: Methuen, 1905. Pp. xiii + 292. 22 × 14 cm. Price 7*s.* 6*d.* **98**

In this interesting book Dr. Munro discusses the question of archæological forgeries. He adopts the point of view that although infallibility may be unattainable, yet long experience and the intelligent use of the comparative method can furnish trustworthy information bearing upon the early history of mankind, and that the possessor of such

experience should not easily be duped even by the most ingenious of counterfeits. The Prolegomena contain valuable remarks on the principles and methods of archæology as a means of detecting spurious antiquities, while the body of the book deals with a number of well-known instances in which the sagacity of the expert has been definitely put to the test.

In Chapters II and III we read of bone carvings purporting to belong to the palæolithic age, of dubious Swiss lacustrine antiquities, and of other suspected objects from various parts of Europe and America. In Chapter IV various British forgeries receive attention, amongst others the products of Flint Jack and of "Billy and Charley," inglorious artists whose works have lived after them to the perennial annoyance of museum curators. Chapters V to VII are devoted to the keenly-debated question of the discoveries at Dunbuie, Dumbuck, and Langbank, now generally known as the Clyde controversy, on which the author has always taken a decided line. The final chapter contains general and concluding remarks, with a mention of the famous tiara of Saitapharnes and a plea for systematic instruction in archæology, with the object of making the deception of the public less easy and profitable than it is now.

The volume is well illustrated and pleasantly written, for the writer's wide knowledge of antiquarian history furnishes him with an ample store of facts for the illustration of his thesis. The only criticism which suggests itself concerns the title, which is rather too comprehensive for a work dealing almost entirely with the prehistoric periods. The book should be read by all who wish to understand the difficulties which beset the path of the archæologist, and every would-be collector will do well to consult it before allowing himself to be tempted along the primrose path of indiscriminate purchase.

O. M. D.

Italy. **Woltmann.**

Die Germanen und die Renaissance in Italien. Von Dr. Ludwig Woltmann. Mit über 100 Bildnissen berühmter Italiener. Leipzig: Thüringische Verlagsanstalt. Pp. viii + 150 and 50. **99**

Dr. Ludwig Woltmann has produced a work of great interest æsthetically as well as anthropologically. Some of us, doubtless, have been struck by the Teutonic physiognomy of some early Italian portraits; we may have wondered at the golden hair of the figures on Urbino and other mediæval Italian pottery, but have been contented to ascribe it to the æsthetic fancy of the artist; some, on the other hand (and among them the writer of this notice), may have wondered what became of the relics of the great Ostrogothic nation, after its final collapse under the gallant Totila and Teias, not knowing to what extent they may have melted down into the general population, nor whether they to any extent preserved a separate and recognisable existence.

These questions and sundry others are more or less solved by Dr. Woltmann in the work under notice, in which several distinct lines of argument are made to converge on the same result.

Thus he shows, in the domain of law, how the Lombards, as they gradually extended their conquests, everywhere introduced Lombardic law, and how while the Roman "privat-recht" was allowed to continue to a certain extent, especially on the lands of the clergy, the Roman public law was abrogated. And how men continued, according to their race, to live under Lombard, Frankish, Burgundian, or Gothic law during many centuries after the conquest.

Again, the evidence of names tells us that the Roman system of nomina perished, and that Lombardic or other Germanic personal names came into general use, even Gothic names occurring till the tenth century or later, and great part of the modern Italian surnames having a more or less obscured German derivation.

Woltmann shows also, from the evidence of portraits or of contemporaries, that a great proportion of distinguished Italians, not only in the Middle Ages but in more recent times, have been more or less blond, and have borne sundry marks of Germanic descent, notwithstanding that, in the general population, owing to climatic or other easily conceivable causes, the northern element has been gradually fading away.

Lastly, the author discusses the character and origins of mediæval Italian culture and its psychological character. This part of his work does not lend itself to epitome. It may be that Teutonic patriotism may sometimes a little colour his judgment; but he has evidently done his best to avoid any error of this sort, and to think and write with all candour and circumspection and without bias. The fulness and thoughtfulness of the book are thoroughly German and much to be admired; and it has another merit to which we are not so much accustomed in German work—conciseness.

The numerous illustrations add very greatly to the value of the book: and the collection of them must have entailed much labour, which, indeed, has nowhere been spared. JOHN BEDDOE.

Africa, East. **Lyne.**

Zanzibar in Contemporary Times. A Short History of the Southern East in the Nineteenth Century. By R. N. Lyne, F.L.S., F.R.G.S. London: Hurst and Blackett, Ltd., 1905. Pp. 328, index, illustrations, appendices, and bibliography. 22 × 14 cm. Price 7*s.* 6*d.* **100**

A history of Zanzibar has been a long-felt want, and Mr. R. N. Lyne has well supplied it. His history of the island from the close of the eighteenth century to the present time is given with accuracy, and he has described the various political developments succinctly.

The chapters on the people, their habits and language, the commerce of the island, and the missions are all sufficient for the purpose for which they are written. The appendices and bibliography add value to the book.

The total revenue of the country has risen from £72,113 in 1892 to £148,590 in 1903, but the outstanding debt of Zanzibar has increased from £35,000 to £95,333 in 1903. In 1892 the total number of vessels entering the port was 149, having a tonnage of 216,446; in 1903, 226 vessels, having a tonnage of 440,716, cleared the port. On the whole British trade has slightly decreased, whereas German trade has very considerably increased.

The illustrations are very good, as are the maps. R. W. F.

Portugal and Scotland. **Dukinfield-Astley.**

Portuguese Parallels to the Clydeside Discoveries. By the Rev. H. J. Dukinfield-Astley, M.A., D.Litt., &c. (Reprinted from the *Journal of the British Archæological Association*, 1904.) 31 pp., 5 plates and illustrations in text. **101**

No. 16 of MAN, 1904, was devoted to a lengthy account given in "Portugalia" of certain Portuguese dolmens and some objects discovered in them. The Rev. H. J. Dukinfield-Astley in the paper before us compares these objects with others found at Dumbuck on the Clyde. In both cases suspicion has been entertained that the things in question might be forgeries, but, as the author points out, the similarity between them is so great that, if they were, they must be thought to be the work of the same hand, and the distance of the respective sites from each other makes this most difficult to believe; he also brings forward evidence from other sources tending to show that both the Scottish and Portuguese objects are perfectly genuine and should not excite doubt or surprise. A. L. L.

Printed by EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

FLINTS OF EOLITHIC FORM PRODUCED IN THE CEMENT FACTORY AT MANTES.

ORIGINAL ARTICLES.

Archæology: Eoliths. With Plate M. Obermaier.

Is it certain that Eoliths are made by Man? *By Dr. Hugo Obermaier, Paris.* 102

The eolithic hypothesis is really as old as the study of pre-history itself, and goes back to the times of the pioneers. Sometimes received with enthusiasm, sometimes rejected by a more critical spirit, it has in recent years again enjoyed a great measure of popularity, largely, perhaps, because on this subject everybody believes himself

FLINTS OF EOLITHIC FORM PRODUCED IN THE CEMENT FACTORY AT MANTES.

competent to form an opinion, whether he possesses the requisite scientific training or not. Far be it from me to depreciate speculative research, provided it satisfies the legitimate demands of science; but it must be remembered that even the trained specialist should never lose sight of the distinction between conclusions founded on facts and those based on the shifting foundation of hypothesis.

The point about eoliths which has always perturbed the majority of professed geologists and physiographers is their extraordinary abundance where they occur at all. According to Rutot, from the period of Maffle down to those of Mesvin and St. Acheul, they diminish in the proportion of 400 : 100 : 10. More than 80 per cent. of the flints

of Saint-Prest (Seine-et-Eure) were, in the opinion of his school, either utilised or retouched. At Puy Courny in Cantal a bare 15 or 20 per cent. are said to have been unworked. Anyone familiar with the enormous gravel beds of Saint-Prest, of the Seine and Somme valleys, and other sites, will be able to judge how vast must have been the population supposed to have made use of these flints, and cannot but be struck by the strange fact that though Nature has left us abundant remains of the fauna and even the flora of that remote age, she has omitted to furnish us with the slightest evidence about the most important creature of all—man himself. No less surprising is the geographical distribution of eoliths. They only occur in fluviatile deposits, and exclusively in regions productive of flint. I have never found an eolith on the great plateaux of the Alps and Pyrenees, where all but the hardest kinds of stone have in the course of ages been reduced to sand or clay, because the local geological strata do not contain flint. The occurrence of eoliths is, therefore, dependent on the presence of two things—running water and flint deposits. In other words, it is a geologico-geographical phenomenon, and it is inexplicable that the supposed primeval men or anthropoids, whose movements must surely have been comparatively free, should never have betaken themselves with their implements to any regions where both these conditions did not prevail.

The firm belief of geologists that eoliths are merely natural products has recently been vindicated by interesting experiments. I need not here enter into a detailed description of the processes employed at the cement factory of Mantes; these have been fully stated elsewhere.* It will be easy to institute further experiments in other establishments where there are machines of similar construction, and where the method of preparing cement from the chalk is the same. I will here only discuss two supplementary points: the identity of the pseudo-eoliths of Mantes with those obtained from geological strata; and the legitimacy of the comparison between the artificial drift of Mantes and the natural drift of tertiary and quaternary times.

I need hardly say that MM. Boule and Gaudry, and I myself, are all familiar with flints found on the seashore and broken by the action of the waves. As practical geologists we have enjoyed ample opportunities of thoroughly investigating the various natural influences to which flint is exposed; and we are no strangers to the rich eolithic collections from the best sites in England, France, and other countries, themselves selected from many thousands of specimens. Having thus been able to institute a close comparison between the products of Mantes and the other eoliths, I can assert that the two classes are so alike that they can be readily mistaken one for the other. I know no eolithic type which has not its correlative at Mantes. Specimens of large size are only absent because the bigger blocks and slabs are not put into the machine; but there occur cores, flakes, scrapers, and borers—in a word all the eolithic types; and these are partly of rudimentary execution like the "utilised" flints of the pre-palæolithic stage, partly of very complete development. Even the remarkably perfect pieces which are occasionally found among eoliths have their parallels at Mantes, where there occur scrapers, hollow scrapers (*lames à encoches*), and borers, which recall the finished types of La Madeleine. Bulbs of percussion, secondary chipping, and the other so-called criteria of intentional workmanship are all represented in their turn; and this is the more remarkable because the flint of Mantes is dry and hard of fracture. Were the softer flint of Puy Courny, for example, placed in the machine, we might expect modifications which differ from those appearing in the more refractory material obtained from the chalk.

The process of manufacturing eoliths at Mantes is a rapid one. Recent experiments have shown me that they can be produced after a few hours of the rotary motion in

* A. Laville, *Percuteurs du type reutélien*, etc. (*Feuille des jeunes naturalistes*, 1905, p. 110); M. Boule, *L'Origine des Éolithes* (*L'Anthropologie*, March-April, 1905); H. Obermaier, *Zur Eolithenfrage* (*Archiv. für Anthropologie*, 1905, No. 1).

water. When the tub is emptied after the lapse of twenty-nine hours the condition of the flints suggests the following sequence of events. Those first affected assume eolithic forms and are subsequently rolled and worn ; at a later stage some of them are subjected to further shocks which give them the appearance of re-worked implements ; in this condition they would resemble later (re-worked) eoliths. In any case it is demonstrated that the cement tubs of Mantes produce eoliths which are astonishingly like those of geological formation. As I showed in my previous paper, the arrangement of the machine proves that the pseudo-eoliths are chipped, not by any part of the mechanism, but by the shock and pressure of one flint against another. The rapid action of the water resembles that of the Rhone, Rhine, and other rivers when in flood, while smaller streams would be still more impetuous. The pot-holes formed by rivers are known to every student of geology. Anyone who has ever studied the ancient gravels of the Seine or Somme and other rivers, will be readily convinced that their volume was once very different from that which we now see. To-day they can scarcely carry down pebbles of small size, but formerly they deposited strata of the coarsest gravel, containing rolled blocks exceeding a metre in diameter. All this presupposes a torrential river-action such as no longer exists in these regions at the present day, but was experimentally reproduced at Mantes.

The investigator or the collector who believes eoliths to be intentionally made must now produce them from sites where flint is not naturally present and torrential conditions did not prevail, and he must support his contentions in every case by proper geological evidence. I may repeat here a statement which I have made before, that I do not myself regard the action of water as the sole agent in the production of eoliths ; the eocene eoliths of Duan, to which I alluded in my previous paper, are a proof to the contrary. If under the term eolith are included certain flints which are contemporary with the established palæolithic industries, but have been merely utilised and thrown away, the more finished implements found in association show that forms indistinguishable from the earlier so-called eoliths were then produced by man. Such forms are found not only near Paris, but also in association with St. Acheul types on the Kent plateau,* and on the Nile and the Zambesi with forms characteristic of the local industries in stone. But the accurate inquirer will not be content to infer tertiary man from the mere occurrence of eoliths unsupported by independent evidence, for such products may just as well have been created by natural as by human agency, and up to date we have no independent evidence that man himself was there to make them.

HUGO OBERMAIER.

Archæology : Eoliths. **Warren.**

On the Origin of Eoliths. *By S. Hazzledine Warren, F.G.S.*

On seeing the interesting discovery of "Machine-made eoliths" by M. Marcellin Boule,† it appeared to me that it might be of interest to give an outline of a somewhat similar line of investigation upon which I have been engaged for some years. I have arrived at the same conclusions as M. Boule, namely, that these flints with variously chipped edges known as "eoliths" cannot in themselves be looked upon as giving any satisfactory evidence of the presence of man. **103**

Unfortunately, different authorities hold different views as to that which constitutes an eolith ; what one classes as an eolith another takes to be the work of Nature. We see this exemplified in Mr. Lewis Abbott's reply to M. Boule in a recent number of MAN. ‡

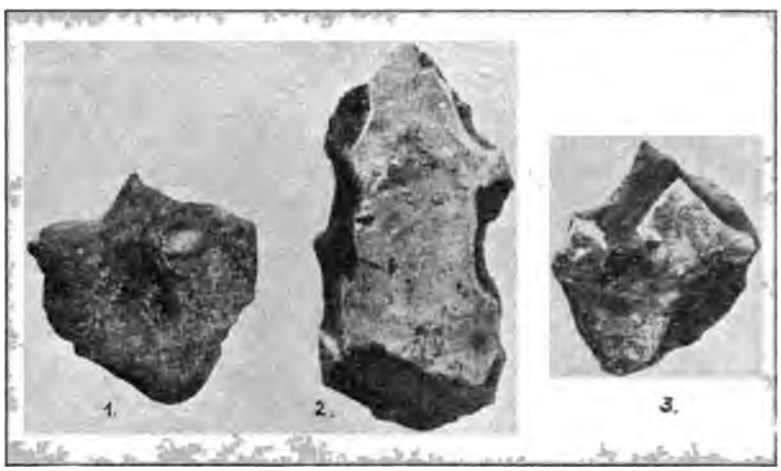
* It is now held by advocates of plateau man that palæolithic types are not found in true association with eoliths in the plateau gravel, but only sporadically on the surface.—[ED.]

† *Comptes rendus Paris Acad. Sciences*, June 26, 1905. A fuller account in *L'Anthropologie* XVI., 1905, p. 257. See also Dr. H. Obermaier, *Archir für Anthrop.*, N. F. IV., 1905, p. 75

‡ 1905, 80.

Moreover, there are different classes of eoliths, formed by different processes, whether these be human or natural. I feel, therefore, that it is advisable, before proceeding further, to define what is meant here by an eolith.

The term "eolith" was originally given by G. de Mortillet to the fire-shattered flints of the Aquitanien of Thenay. It was subsequently widened in its application to include everything considered to be the work of man prior to the Pleistocene period.



FIGS. 1-3.

Sir Joseph Prestwich, in his original communications on the subject, described certain rude palæolithic implements from the chalk plateau of Kent, and also certain other chipped flints, constituting a definite series of forms, which were of a non-palæolithic character. These latter he named "Plateau implements." It is these—the non-palæolithic "plateau implements" of Sir Joseph Prestwich—that I take as the type series of the forms referred to here as eoliths.

I have conducted a series of experiments on the accidental production of these forms by pressure. These experimental eoliths were exhibited at the conversazione of the Geologists' Association in November, 1900, when they naturally received great opposition from the advocates of eolithic man. I have refrained from publication until now in the hope that I might have an opportunity of going over the chalk plateau of Kent, and of investigating the high level drift in which the flints have been found. At the same time, field work has no actual bearing upon the question whether these flints are or are not the work of man. Moreover, I have found them myself in many different localities; in fact, their presence appears to be general wherever broken flints of suitable shape occur, though their abundance varies greatly.

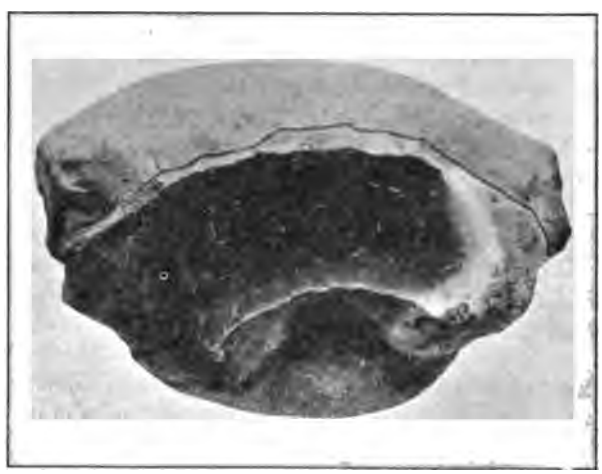


FIG. 4.

I first found accidentally chipped flints of these eolithic types upon roads which had been stoned for some little time, but which were still loose. Most of the characteristic eolithic types, including even "borers" with reverse working, may be found upon careful

search being made in these situations. On examination I found that they were not made by the stroke of the horse's hoof, nor, as a rule, directly by the cart wheels. These had supplied the necessary pressure, but the actual flaking had been executed upwards by the reaction of the ground on which they rested. I have found all the splinters still sticking in the ground and occupying the notch or hollow chipped out of the edge of the flint.

At the next stage of the enquiry a suitably shaped flint was taken, that is to say, one with at least one nearly flat or slightly concave surface, such as those of which "eoliths" are formed. Such a flint was placed with its flat surface on the ground, and one of its edges upon the rounded surface of another stone level with or slightly rising above the surface of the ground. It was then found that by bringing a weight to bear upon the flint a good example of the "hollow scraper" or notched type of eolith was immediately produced. Even a sustained heavy pressure, or sudden stamp with one's heel, was sufficient for this purpose in some cases.

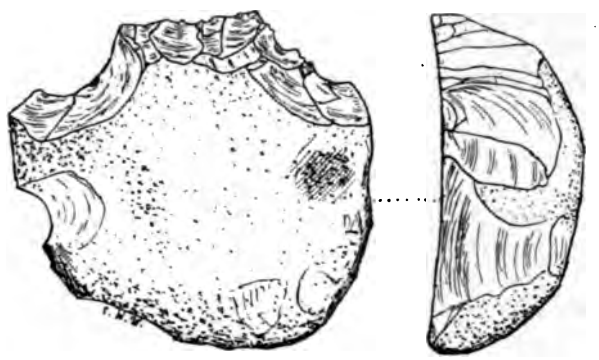


FIG. 5.

The remarkable fact is that, when the edge of a flint is pressed against another stone, the resultant notch in the edge of the first flint is not broken away in one piece but in a quantity of small splinters, producing the effect of parallel flaking on the broken edge. In most, if not in all, cases there is a certain amount of slip or lateral movement between the two stones. This results in a kind of grinding action, and it is possibly this, in part at least, which causes the succession of fine splinters to be removed. The forms produced are not confined to the simple notched type, but depend partly upon the shape of the flint operated on, and even more, upon the nature of the surface upon which it rests. But as the stone, or stones, on which it rests and against which it is pressed, are usually more or less rounded, a corresponding hollow or notch is by far the commonest form produced. A borer with reverse working is imitated by two such notches being made a short distance apart and from opposite sides of the flint. The chances of this happening accidentally are more remote than in the case of the single notch, and these forms are consequently far more scarce.

FIG. 6.

In the production of some of the "machine-made eoliths" of M. Boule, it appears to me that something more than merely rolling has been going on. I think that some of the flints must get wedged, or in some other way ground together under pressure, as might very well happen in the washing mills described by him.

Now, if flints can be ground together under pressure by the action of "soil-creep," or other of the multifarious vicissitudes of Nature—which, I take it, none will deny—then it is demonstrable that such forms as the eoliths must necessarily be produced.

In working the palæolithic drift of High Down, in the Isle of Wight (*Geological Magazine*, 1900, p. 406; 1902, p. 97), where I did most of the digging myself, I found an eolith closely and tightly adhering to the rounded stone which had made it, and against which the notch accurately fitted. There is no doubt that the two stones lying

adjacent to each other in the drift had, through the action of "soil-creep," been pressed or ground together. The round stone, being of an unsuitable shape, was unaffected, the flat piece of flint was converted into an "eolith." Not only was the notch chipped out of one edge where there was a slight excrescence on the rounded stone, but, there being an intervening concavity on the same stone, the opposite edge of the "eolith" was also chipped in an outward curve along a more extended line of contact.

It has previously been suggested by Professor T. McKenny Hughes,* Mr. W. Cunnington,† and, prior to the present eolithic controversy, by M. G. de Mortillet,‡ that such forms as these eoliths might be formed by pressure against other stones. Here we have strong evidence of the actual production of such a form, in Nature, and by this process.

Since writing the above, I have read with much interest the articles on this subject in the November number of MAN.

The Rev. H. G. O. Kendall§ raises the question of the age of the early palæolithic implements found associated with the eoliths on the chalk plateau. I think it is hardly justifiable to eliminate the distinctive *eolithic types*, and then class as "eolithic" the implements of purely palæolithic type which belong to a well-marked, and long recognised, stage of the palæolithic period.

It is, however, undeniable that these early palæolithic implements belong to an ancient drift of the plateau of Kent; it is also true that they only occur as derived specimens in the valley gravels below a certain level. But these plateau drifts have probably been re-distributed many times, and it must not be concluded that the last re-distribution was prior to the existence of the present valley system. Such hill-drifts are not always of the same age. Indeed, they are sometimes contemporary with certain of the gravel terraces in the valleys below. This is the case in the Isle of Wight, where the early palæoliths only occur as derived specimens in the hill-drifts.

It is also true that there are eolithic types which are contemporary with, and others which are later than, these early palæoliths. The essential claim of the eolithic theory, however, is that the true eoliths are older. In support of this is the fact that the plateau gravel which has been struck in various trial pits has yielded nothing but eoliths. Negative evidence is notoriously unreliable, but at the same time it is perfectly possible that these eoliths, whatever their origin, may be older than the early palæoliths.

With reference to the criticisms of Mr. J. Russell Larkby,‖ it is necessary to bear in mind that all eoliths are not of the same character. There are some which (in my opinion) are capable of being formed by water-abrasion. Such especially as the "percuteurs," "retouchoirs," and certain types of "grattoirs," of M. Rutot. These are characteristic of river gravels; and it is to these, as I take it, that the work of M. Boule primarily applies. On the other hand, there are other forms, such as the double notches with point, and those with reverse chipping, which, as Mr. Larkby points out, could hardly be formed by free rolling in a river-bed. Were these types characteristic of deposits where such rolling (and no other geological process) had been extensively going on, it would be favourable to their human origin. But this is not the case. Although they may occur to some extent anywhere, they are only characteristic of hill-drifts, the material composing which has undergone a totally different process, namely, that which I propose to name "soil-abrasion."¶ That is to say, the wear and tear occasioned by the grinding together of stones under pressure, due to the multifarious phenomena

* *Proc. Cambridge Phil. Soc.*, IX., 1896, p. 124.

† *Natural Science*, XI., 1897, p. 332; *Quart. Journ. Geol. Soc.*, LIV., 1898, 291.

‡ *Le Préhistorique, Antiquité de l'Homme*, 1883, pp. 79-96.

§ MAN, 1905, 91. ‖ MAN, 1905, 92.

¶ Perhaps the more perfect forms of these types are confined to the drifts that have been subjected to "soil-abrasion."

which may be classed under the general name of "soil-creep," the slipping, sliding, and foundering of the insoluble surface material from higher to lower levels. I hope to go more fully into this question at no distant date.

With regard to the angle of chipping, the Mantes flints have suffered from abrasion, concussion, and pressure. I agree that I should not expect all these causes to operate in Nature under the same conditions, it is therefore necessary to separate their effects, or we get the mixed results referred to.

Mr. Larkby says that the ordinary eolithic flaking angles are from 45 deg. to 72 deg. I think the higher value is somewhat too low. I have some records of Mr. Harrison's, and also of other, eoliths, and, while I have nothing so low as 45 deg., there are several of 85 deg. and 87 deg., even one of 94 deg. While their crushed edges are as high as 102 deg. and 113 deg.

In most of these cases, one has curved surfaces to deal with, and the differences are probably in the methods of measurement. In the case of pressure-chipping, the angles on the same flint, as is seen in the eoliths, are remarkably uniform. I have measured a series of these, and none of them are below 50 deg., and none (except the crushed edges) above 86 deg.

The following may be taken as a typical example of the best effects of pressure-chipping :—The first flaking is at about 52 deg., the next series, truncating the former facets, is at about 70 deg., while the edge is crushed down to about 102 deg. I think these values may also be taken as typical of the best eolithic work. There are, in both cases, large numbers of examples that do not show three sets of facets as above defined. There is often only one set. In all these respects, whatever is true of pressure-chipped flints is also true of the eoliths. It is inconceivable that they can have been produced by a different process.

S. HAZZLEDINE WARREN.

EXPLANATION OF FIGURES.

ARTIFICIAL IMITATIONS OF EOLITHS PRODUCED WITHOUT DESIGNED FLAKING.

Fig. 1. Two notches meeting at a point at a corner of the flint. Cartwheel flaking on a new road.

Fig. 2. Long and narrow flint, flat on one side and rounded on the side shown, found on a new road. A cartwheel, or cartwheels, had passed over the upper (rounded) surface, chipping both side edges by the reaction of the ground: and producing, *inter alia*, a notch on either side. Compare the eolithic type of Sir J. Prestwich, *Journ. Anthr. Inst.*, XXI., 1892, Pl. 19, Fig. 2.

Fig. 3. Tabular flint with reverse notches made from either side, and meeting at a point. This is a flint from river gravel, found upon a new road.

Fig. 4. Tabular flint with notch and chipped edges. Palæolithic Drift of High Down, Isle of Wight. Compare *ib.*, Pl. 20, Figs. 4 and 5.

Fig. 5. A differently shaped flint operated on in the same way as above. Note the corresponding difference in its ultimate form. Remarkable parallel flaking has been produced which is best seen in the side view. Compare *ib.*, Pl. 19, Fig. 3.

Fig. 6. Tabular-shaped flint, with chipped end approaching the double notched form. Cartwheel flaking. Compare *ib.*, Pl. 20, Fig. 9.

Sinai. Petrie.

Note on Semitic Worship in Sinai. *By W. M. Flinders Petrie.* **104**

I regret to see in MAN (No. 73) some more theories which seem impossible. The great bed of ashes on the hilltop at Serabît is, I see, not now referred to smelting, but to some undefined use of fire. Certainly any man using fire for warmth or cooking would be in the shelter of the valleys or mines, and not in the bleakest spot of all, in front of the sacred cave on the hilltop, which is distinctly a place for sacrifice. No burnt bones were found; and this is in accord with Semitic usage, as Robertson Smith (*Religion of Semites*) writes of "all the ordinary festal sacrifices, vows, and freewill "offerings, of which the share of the deity was the blood and the fat of the intestines, "the rest of the carcase . . . being left to the worshippers to form a social feast."

Bones from a feast would be cleared away by hyenas and dogs, in the same way as they were removed from our own camp.

The tanks of ablutions we now read are "water tanks in a building that were doubtless as much a place of defence as for worship." Yet the largest tank of all is outside the door of the building; nor would all the tanks inside hold a day's supply for an efficient garrison. Moreover, the defensive theory is physically impossible, by the very plan of the place.

The steles are compared with rock inscriptions of quarries. But there are plenty of quarry inscriptions at Serabit, and they are all different from the steles in character. Also not a single instance has yet been quoted of a memorial stele of a visit, erected at a distance in front of an Egyptian temple. A great pillar-custom existed in Sinai, and was copied by the Egyptians. The conical stones found in the temple are purely Syrian; and also the altars of incense. None of these ritual customs were followed in Egypt.

Many other details mentioned are not worth going over again, and full information will be found in the volumes on Sinai which will be published by Mr. Murray and by the Fund. It is a misfortune for the public when discussion is based on imperfect information.

W. M. FLINDERS PETRIE.

REVIEWS.

Malay Peninsula. **Martin.**

Die Inlandstämme der Malayischen Halbinsel: wissenschaftliche Ergebnisse einer Reise durch die Vereinigten Malayischen Staaten. Von Dr. Rudolf Martin, Professor der Anthropologie und Direktor des Anthropologischen Institutes der Universität Zürich. Mit 137 Textabbildungen, 26 tafeln und 1 karte. Jena: Gustav Fischer, 1905. Pp. xiv + 1,052. 28 × 21 cm. Price 60 marks. **105**

This monumental volume may be said to be divided, like Cæsar's Gaul, into three parts. The first, ending with p. 218, consists of an introductory geography and history of the Malay Peninsula, and gives an account of the environment and, so far as anything is known thereof, the antecedents of the wild tribes, which are the main subject of the work.

This introduction is, as it were, the frame of the picture, and no doubt it may be considered necessary that a big picture should have a correspondingly large frame. But it must be said that a good deal of this part of the work has little relevance to the real subject, and that some antiquated theories and exploded guesses are here revived as to the condition of the Malay Peninsula prior to the beginning of the fifteenth century (which is the dawn of history in that region). Nevertheless, this chapter contains a valuable collection of references to very out-of-the-way authorities, and indicates most conscientious research, while the account of the geology, climatology, flora, fauna, and prehistoric remains is excellent, and the review of the author's predecessors in the investigation of the wild tribes is useful, critical, and thoroughly germane to his main subject. In his discussion of the tribal names he again sometimes rather obscures the issue by reviving exploded conjectural etymologies, but otherwise little fault is to be found with it. If he prefers to use Sĕnoi instead of the well-established, though admittedly conventional, name of Sakai for certain tribes, I do not quarrel with him—I merely point out that some at least of these tribes do *not* call themselves by that name (which merely means "men"), but prefer other titles—some, while claiming it for themselves, refuse to extend it to neighbouring tribes who also claim it—and that I think De Morgan is probably quite right in asserting that it is also claimed by the Sakai-speaking Negritos of Northern Perak, who are not (except in language) Sĕnoi or Sakai at all.

To the second and bulkiest part of the volume, consisting of 434 pages, I cannot pretend to do justice. It contains a detailed and highly technical survey of the physical anthropology of these tribes under the subheads of somatology (investigations on the living body) and morphology (investigations on the skeleton). Speaking entirely without any technical knowledge of these matters, I can only say that the numerous comparative analyses of measurements here given appear to have been done with the utmost care, and will no doubt be of the greatest interest to specialists capable of appreciating them. The upshot of the whole matter is that among the aborigines of the Peninsula there are at least two quite distinct racial types: one, mainly found in the north, being undoubtedly Negrito with closely-curled hair; another, mainly inhabiting the central area, being a type which is distinguished by wavy hair, quite different in character from the almost woolly hair of the first type.

In the south of the Peninsula there appears to be discernible a third type with straight hair, but it is represented by crosses with one or other or both of the two preceding types. Although one may meet with numerous individuals that are fairly representative of it, there appears to be no tribe entirely composed of individuals unmixed with an infusion of blood from the other two races aforesaid. It is the normal type of an uncivilised Malayan race.

These distinctions have been observed and pointed out before, but it is Martin's especial merit to have proved their existence by means of definite scientific methods of measurement. He has conclusively negatived the old theory that all the varying types of the Peninsula could be explained by the crossing of Negritos and Malays and has definitely established the independent existence of a distinct Sakai (or, as he prefers to term it, Sĕnoi) race, not descended either from the Negrito or the Malayan type. This is Martin's greatest contribution to the solution of the vexed problems which the aborigines of the Peninsula present, and his name will always be associated with it. I am convinced that future research will only confirm his conclusions on this point.

The third part of the work, comprising 347 pages, is entitled by the author "Ergologie," and consists of an extremely good account of the manner of life, social customs, and religious beliefs of the aborigines, together with a short chapter on their language. I draw particular attention to the chapters dealing with apparel and personal adornment, weapons and hunting, social organisation, and decorative art. Of course, a great deal of the material for this part of the work is derived from the older authorities, but it is carefully compiled and critically handled.

On one or two points I venture to differ from the author; he seems to me to have the preconceived idea that all the aboriginal tribes are, or normally ought to be, on much the same "ergological" level of a mere nomadic hunting and fruit-gathering existence. When he finds some of them, among the Sakai especially, living in more or less permanent habitations and practising a primitive kind of agriculture, he jumps to the conclusion that this is a development due to Malayan influences. This assumption is to my mind conclusively negatived by the fact that these tribes have their own terms for "house," "plantation" (that is, a clearing made in the jungle for the planting of their scanty crops), "rice," and even distinct words for "rice in the husk," "husked rice," and "rice boiled for food." Not only are these words in most cases quite non-Malayan, but some of them are with absolute certainty identifiable with their synonyms in the languages of tribes that have reached a similar state of cultural development in Indo-China, and are probably related by descent to the Sakai, though there can have been no sort of contact or intercourse between these scattered kinsmen for hundreds or perhaps thousands of years. In the face of these facts it is impossible to believe that the Sakai have learnt the habit of dwelling in houses and planting and eating rice from a Malayan race; and, unless they have been schooled by an Indo-Chinese race of higher culture (as some of the tribes near the coast almost certainly have been), the only

possible conclusion is that, for many centuries past and independently of all outside influences, they have been acquainted with these elements of material civilisation and have put them into practice when circumstances admitted or seemed to require it.

In justice to Martin, however, I must observe that he does not profess to have studied these tribes from the linguistic side ; his brief language chapter contains little that is new, except two short vocabularies, which (making allowance for their German style of spelling) are very accurate and compare well with other materials collected from neighbouring tribes.

In the conclusion of the work the author devotes forty-two pages to the consideration of the relation of the three racial types of the Peninsula to other races. He points out the resemblance of the Negrito type to the Andamanese, that of the Sĕnoi to the Veddas of Ceylon and certain tribes of Indo-China and the Eastern Archipelago, but in view of the inadequacy of the evidence available for some of these races, leaves the question of their relationship more or less an open one.

Eleven pages are then devoted to an admirable bibliography, which includes even MS. material filed in official records, and shows how thoroughly the author has mastered the literature of his subject. Of the illustrations which adorn this valuable work, the greater part are faithfully reproduced from admirable photographs taken by Martin himself. They are by far the best illustrations that have ever appeared of the aborigines of the Peninsula and testify to the author's skill as a photographer and his judgment in the selection of typical subjects. They are splendidly reproduced and will not soon be bettered.

Throughout the book Martin maintains a critical attitude towards the work of others who have dealt with the subject, and in the main his criticisms are well-considered and just. I have left to the last what is perhaps the most important of all, namely, his attitude towards the late Hrolf Vaughan Stevens, a collector of whose labours among the aborigines of the Peninsula so much has been heard of late years.

Issued with the more or less qualified *imprimatur* of a group of distinguished scholars and eminent men of science in Berlin, Vaughan Stevens's reports seem to have been accepted for gospel by European anthropologists. His theories as to the symbolic meaning of the decorative art of these savages, the existence among them of endogamous clans named after animals and plants, and what not, have found their way into scientific treatises and popular handbooks and will no doubt in due course filter through into university extension lectures and the syllabus of the secondary schools. That they rest, for the present, solely on the uncorroborated inferences of a highly uncritical person, who in the East was generally regarded as a modern Münchhausen (if not a modern Ananias) is a fact apparently unknown to the learned gentlemen who quote him so glibly. Nor do I blame them in the least ; but I think Martin is doing the cause of truth a signal service by laying bare the rotten basis on which this elaborate superstructure has been erected.

Without going into matters of detail, in regard to some of which I think Martin's destructive criticism has gone too far, I am entirely in accord with his main view that while we may credit Vaughan Stevens with a generally truthful intention and may provisionally accept him as a witness in regard to many matters which he professes to have himself observed, yet many even of his statements of fact require to be checked by more critical observers, and the theories with which he has bemused the anthropological world must be cleared away, root and branch. It was high time that the development of the Vaughan Stevens *mythus* should receive a check, and it is not the least of Martin's merits that he has in this matter taken up the somewhat invidious position of an iconoclast. In conclusion I must point out that while a great deal has been written about the aborigines of the Peninsula, and the allusions to them in all sorts of books and periodicals would constitute a library of some bulk, this is the first adequate

account of them that has ever appeared as an independent monograph in book form. Besides recording the results of Martin's own exploratory journey in 1897, the work embodies so much material gathered by other observers, that the labour involved in its composition must have been enormous, especially having regard to the fact that it was mainly written in the intervals between the author's official duties. The absence of an index is to be regretted, but the book, in my judgment, well maintains the standard of scholarship and research for which the author's countrymen are distinguished, and will long remain a conspicuous monument of industry and erudition. C. OTTO BLAGDEN.

The lapse of eight years since Professor Martin returned from the East has enabled him to publish his results in a manner which can only be described as masterly. And no higher tribute can be offered to the Professor of Physical Anthropology at Zürich than to state that his book on the aboriginal tribes of the Malay Peninsula will rank with the celebrated work of the brothers Sarasin on the Veddahs of Ceylon. It seems a curious coincidence that in these two British dependencies, Swiss enterprise has been the means of supplying the scientific world with detailed information, collected with professional system and precision, and results marshalled with the most industrious and methodical attention. It is pleasing to notice that Professor Martin makes full acknowledgment of the assistance rendered by English officials in the Straits Settlement, and the cordiality of his relations with Mr. Skeat (who is the recognised British authority on the subjects with which Professor Martin deals, and whose own work on the aboriginal tribes is on the point of publication) provides an example which might well be followed in other instances with much advantage to all concerned. The part of Professor Martin's book with which the reviewer is here concerned, deals with the physical conformation of the wild tribes of the Malay peninsula. Professor Martin has contributed greatly to the difficult problems of determining the actual elements of the aboriginal population, and the relations of the several types to one another. His conclusions are based primarily on observations made on 119 individuals of the various wild tribes; and though his craniological material is small, he has collected all available evidence on this part of the subject.

Our views on the general relations of the aboriginal tribes of the Malay peninsula have undergone some striking changes. It has long been realised that the aborigines are of what has been called the Negrito type, but, at first, subdivisions were not clearly recognised, and the terminology used in designating the several tribes has been unsatisfactory or even misleading. In a subsequent stage of the progress of our knowledge it appeared as though the following divisions might fairly be recognised, viz., (*a*) a group of tribes in which Malayan characters, especially in respect of straight lank hair, were prominent; (*b*) a group of tribes in which brachycephalic or mesocephalic cranial proportions were associated with closely coiled crisp woolly hair; and (*c*) a group in which mesocephalic or dolichocephalic cranial proportions were accompanied by the possession of wavy undulating hair. Moreover, the group (*b*) could thus be brought into line with the Andamanese negritoes, with the Aetas, and possibly, however remotely, with the African pygmies, while the group (*c*) would be associated with the Veddah tribes, with some of the aboriginal tribes of Madras, and possibly with an element in the constitution of the aboriginal native of Australia. But perhaps the chief contribution made by Professor Martin to the literature of this subject consists in his conclusion (based on no little evidence) that the group (*b*) which we may call Semang, is differentiated from group (*c*) which Professor Martin calls Senoi (while Messrs. Skeat and Laidlaw prefer the term Sakai) by the characters of the hair alone and not by stature, cranial proportion, or skin colour.

We find ourselves, therefore, in an *impasse* from which only the advent of more abundant material in the form of measurements can extricate us. The case is very

similar to that of the Australian aboriginals and certain of the Melanesians, especially the aborigines of New Britain ; the concordance of cranial character is (as between the Senoi and Semang) almost absolute, the difference in stature is not very great, but in respect of the hair there is a very striking contrast. Professor Martin does not decide in favour of the test of hair-character as against that of cranial proportions, but mentions that Virchow laid the greater stress at one period on the latter criterion, though he subsequently altered his view in favour of the test of the hair.

It may be repeated that Professor Martin has spared no pains to render his account as comprehensive as possible, and indeed the work would serve as an admirable introduction to anthropometry and the racial morphology of the skeleton. In the present connection it is only possible to select a very few points for special mention. Attention is particularly called to the diagrams (of the kind first used by Professor Thomson, of Oxford) employed to represent the bodily proportions in different tribes ; three diagrams will be found on pp. 290, 291, and another very interesting and instructive series of diagrams (which we also owe to Professor Thomson) appears on p. 414. The tables and diagrams illustrative of the several values of the "exponent of oscillation" of Stieda (analogous to the "standard-deviation") are also remarkable (*cf.* pp. 350, 380, and 385).

The delicate conformation of the skeleton in these wild aboriginal tribes is the subject of special comment, and the character may be claimed as an "infantile" one. The cranial capacity, too, is not so small as might be expected, and stress is laid on this observation. The present reviewer is (on p. 577) credited with not supplying the absolute measurements of the Semang scapulæ described in a paper on "Some Anthropological results of the Skeat Expedition," published in the *Journal of the Anthropological Institute* in 1902. This criticism is, however, undeserved, for the measurements in question are duly recorded in the paper to which reference is made.

W. L. H. DUCKWORTH.

Evolution. **Ridgeway.**

Origin and Influence of the Thoroughbred Horse. By W. Ridgeway, Disney Professor of Archæology in the University of Cambridge. (Cambridge Biological Series.) Cambridge : University Press, 1905. Pp. xvi + 538. 22 × 14 cm. Price 12*s.* 6*d.* net. **106**

This is one of those interesting and suggestive books which will be welcomed even by those who fail to agree with everything in it. The author is a distinguished classical scholar who attaches at least as much importance to what an ancient writer says as to how he says it, and who has given us many a clever sketch of what has been written by classic authors on archæological subjects.

In this case he has laid before us the result of his enquiries into the evidence as to the character and geographical distribution of the horse, and has strung the whole together by a working hypothesis, which is that the English thoroughbred is derived from a race which was developed in North Africa, and not, as generally supposed, in Arabia.

There are peculiarities of colour and structure in the several breeds of horse, ass, and zebra, for some of which a satisfactory explanation can be offered, while in respect of others the imagination has still free play. The hair of the mane falls in some, but has a tendency to stand erect in others. The hair on the tail is gathered to a tuft at the end in some, but starts from the stump in others. There are in some callosities on the legs and feet which are absent in others. The pattern of the colours varies, and there are many constant traits of temper and habit. All these characters are very persistent and furnish criteria by which the origin of the mixed breeds may be traced after many changes of surroundings and selective crossings.

Darwin's view was that the similarity in the most distinct breeds in their general range of colour, in their dappling, and in the occasional appearance, especially in duns,

of leg stripes and of double or triple shoulder stripes, taken together, indicate the probability of the descent of all the existing races from a single dun-coloured, more or less striped, primitive stock, to which our horses occasionally revert. He thinks, however, that the presence of shoulder, leg, and spiral stripes in the horse—their occasional absence in the ass—the occurrence of double and triple shoulder stripes in both animals, and the similar manner in which these stripes terminate at their lower extremities—are all cases of analagous variation in the horse and ass, and that these cases are probably not due to similar conditions acting upon similar constitutions, but to a partial reversion in colour to a common progenitor which was striped on the legs, shoulders, face, and probably over the whole body like a zebra.

Professor Ridgeway does not accept the theory of a single progenitor for the horse kind and briefly discusses the evidence in his first chapter. He starts with two distinct breeds of horse—the one a buff, or dun, or white, stout pony found, at the time when he takes up the story, thoughout the northern parts of Asia and Europe; the other a taller, fine limbed, swift, bay horse occurring, when first introduced to our notice, in Libya and the adjoining regions of northern Africa.

He describes the geographical distribution and variation of the northern type showing that in the easternmost part of the region it is still represented by wild forms which greatly resemble some ancient breeds depicted by primeval man on the walls of his cave dwellings or on his bone and ivory drawing tablets.

At the western end a finer, faster breed of pony still shows most of the characteristics of this northern race. It was a useful animal and was soon drawn south over the great natural barriers of central Eurasia by purchase, conquest, and theft, and our author discusses the result of crossing it with the larger, fleeter southern breed.

This southern type of horse was developed, according to Professor Ridgeway, in Libya and the adjacent parts of north Africa.

He holds that as a consequence of environment the evolution of this breed has been along the same lines as those which have determined the character of the African zebras in respect of colour, structure, temper, habit, &c. That some peculiarity of character should affect animals belonging to different groups in the same zoological district is not improbable. Both rodents and carnivores are marsupial in Australasia, therefore we need not be much surprised to find striped and spotted horses in the land of the giraffe and the zebra. The zebras vary among themselves in different parts of Africa; but, although they differ in their markings and intensity of colour, there is running through them all a tendency towards a definite pattern, and this pattern comes out in the Libyan horse and its descendants more or less distinctly, and more or less fully developed, at various ages in the life of the animal and under various circumstances depending upon selective crossing, &c.

Of course, there were horses in Arabia far enough back to have supplied the traditional sires of our English thoroughbred, but Professor Ridgeway's point is that the Arab was not developed in Arabia, and that the barb was not, as has been usually supposed, a horse of Arabian origin which had been introduced into North Africa and had thence travelled on into Europe more or less crossed with other breeds.

He contends that the ancestor of the Arab and of the thoroughbred was developed in Libya, where it was known 1,000 years before the Christian era as the fleetest and strongest horse that could be anywhere found, and for this breed he suggests the name *Equus caballus libycus*.

This better breed was in great request from the earliest ages of which we have any record. Red or bay horses are mentioned in Zechariah; Solomon procured horses from Egypt; Homer tells of warriors of Egyptian Thebes with chariots and horses; Strabo mentions the breeding of horses in northern Africa; and Pliny speaks of the nimble and docile Numidian horses; while Pausanias tells us that the Libyans rode on horseback.

But it may be inferred that there was no good breed of horses, perhaps no horses at all, in Arabia before the Christian era, because, although camels are specified, there is no reference to horses in cases where they would have been mentioned had they been there. The horses of Arabia, therefore, must have been introduced through Egypt from Libya and other parts of North Africa, where we know that a breed of the same type as the Arab was ridden 1,000 years before. He further shows what are the results of crossing this African breed with others akin to the northern type, and explains that the present or historical distribution of these crossbreds is in accordance with what we should infer from the direct evidence of history and tradition.

Instead, therefore, of the Arab being the parent stock of the Barb and other North African breeds, and of the English thoroughbred, the Arab is derived from the Libyan horse and was not imported into Arabia until long after the Christian era, and the author is led on to speculations as to the far-reaching influence which the introduction of horses among the people of that part of Asia had upon the spread of the Mohammedan religion. Professor Ridgeway, by his ingenuity in criticism and his skill and industry in collecting evidence, has produced a work which must give a new impulse to all those who cultivate this and similar fields of enquiry, and has produced a book of which account must be taken in all future work on the subject. Many of his inferences are given as probabilities, not as certainties, and he himself, as well as his readers, may look forward to some useful discussion of the vast amount of material which he has brought together and to some wholesome controversy arising out of it, for controversy is the fan which winnows out the grain from the chaff. T. McKENNY HUGHES.

PROCEEDINGS OF SOCIETIES.

Proceedings. **British Association.**

Anthropology at the British Association. South African Meeting, 1905. **107**

The Anthropological section of the British Association met from August 16th to 18th in Cape Town, and from August 29th to September 1st in Johannesburg.

The address of the President, Dr. A. C. Haddon, F.R.S., dealt with the ethnology of South Africa, and will be found in full in *Nature* (September 7th), and in the *Report of the British Association* (*South Africa*), 1905.

In the summary which follows, the final destination of each paper, so far as it is known, is indicated in square brackets.

E. Sidney Hartland.—*The Totemism of the Bantu.*—M. Casalis pointed out fifty years ago the similarity between the practices and beliefs of the Bantu and the American natives. The object of the paper was to examine the Bantu practices and belief with a view to ascertaining :—

1. How far they extend, and what evidence there is of their former existence where they are no longer to be found.

2. Whether there is any essential difference between the Bantu practices and belief, and what is generally understood by totemism elsewhere.

3. The process of decay, especially among the Eastern Bantu from the Zambesi southward.

The conclusions arrived at were that, though there is little in what is recorded of the Western Bantu which points directly to totemism, there is reason to think that it once generally prevailed among the Bantu ; that its disappearance from the Western Bantu is due to contact with the pure Negro along the west coast ; that among the eastern and northern Bantu the decay of totemism is due to the change in the reckoning of kinship from reckoning through the mother only to reckoning through the father, and to the ancestor worship which has arisen upon the new social basis thereby laid ; and that there is no essential difference between the Bantu practices and belief and what is generally recognised as totemism elsewhere.

L. PERINGUEY.—*The Stone Age in South Africa.*

HENRY BALFOUR.—*Musical Instruments of South Africa.*—The musical-bow series and the xylophone (*marimba*) group are of special interest as illustrating in each case what may prove to be a phylogenetically connected series covering a very wide area of dispersal both within and without the African continent.

The pulsatile instruments with vibrating tongues of bamboo or metal (*sansa* type) present a very wide and continuous distribution in Africa, but do not appear to occur elsewhere, except in the regions of the New World which have been affected by the Negro immigration; nor does this form of instrument appear to have led up to any highly developed type, unless the graduated "comb" of European musical boxes, which presents at least a close analogy, is to be regarded as a derivative from the African *sansa*, a matter which is open to doubt.

Like the "bull-roarer," the noise-instrument known to the Germans as *reib-trommel* ("rubbing-drum"), and described by Holub as found in use among the Barotse, is another instrument having a peculiarly wide though apparently disconnected distribution. It has its counterparts in some other regions of Africa, both east and west; it is met with in Southern India, in Honduras, and Venezuela, and is a popular noise-making instrument in Western Europe, where it was known as far back as early in the seventeenth century, and probably earlier.

The *goura* of the Bushmen and *iseba* (*lesiba*) of the Basuto and some other Bantu tribes is essentially a *wind* instrument. Its presence in South Africa has not as yet been satisfactorily accounted for, since there is an absence of evidence as to the manner in which this peculiar and specialised instrument was developed in this region, supposing it to be indigenous; nor are there any satisfactory clues as to whence it came, in the event of its having been introduced from elsewhere. It does not appear to be found anywhere north of the Zambesi. The instruments which in structure and use most nearly resemble the *goura* are the small bows with flat, ribbon-like strings, which in Eastern Asia are attached to kites in order that they may hum or buzz in the wind; but it is by no means clear that these are to be regarded as morphologically related to the *goura*.

MISS B. PULLEN-BURRY.—*A Few Facts concerning the American Negro.*—In this paper an attempt was made to show that notwithstanding their transplantation to the western hemisphere, the hardships of 250 years of slavery, their ignorance when emancipated, and their incapacity to assimilate such civilisation as is implied in American citizenship, the Negroes now form one-seventh of the entire population of the United States. Statistics of 1900 show the race to exist in greatest density in the territory known as "The Black Belt." The injurious effects of urban life on the Negro are evidenced by information obtained from the health officer of Washington, D.C. The Negro's criminal record, declared to be greater at the north than at the south, is answered by the fact that in northern cities his expulsion, owing to race-prejudice, from almost every competitive trade makes it increasingly difficult to earn a livelihood. In fifty-six great cities statistics show a greater death rate than birth rate, but on the cotton fields in the south, where the Negro is gradually attaining proprietorship, he lives normally. Outside cities, 85 per cent. of the race depend upon agriculture for support. Prevailing diseases, crime, with some details as to lynching, the economic status of the race, &c., were dealt with in this paper.

PROFESSOR F. VON LUSCHAN.—*Artificial Deformation in South Africa.*—In this paper all artificial deformations, with the possible exception of cicatrisation and lip-deformation, were traced to a foreign source.

CANON CRISP.—*The Mental Capacity of the Bantu.*—The Bantu languages are capable of expressing any idea, so much so that foreigners will often employ Bantu words in their ordinary speech. The Bechuana particularly are noticeable for rapidity

of thought, and their native shrewdness and wit render them dangerous disputants. Instances of the facility with which Bantu acquire European learning were given.

WILLIAM GRANT.—*Magato and his Tribe.*—[*Journ. Anthr. Inst.*]

DR. S. SCHÖNLAND.—*Arts and Crafts among the Natives of South Africa.*

W. A. SQUIRE.—*The Bushmen and their Art.*—This paper was illustrated by a collection of copies of Bushmen drawings. The author explained the methods adopted by the Bushmen, and touched upon the object and meaning of the drawings.

J. P. JOHNSON.—*Stone Implements of South Africa.*

A. E. MABILLE.—*The Basuto.*

PROFESSOR F. VON LUSCHAN.—*The Racial Affinities of the Hottentots.*—The author contended, mainly on the evidence of language, that the Hottentot are a Hamitic people which had come into contact with the Bushmen and absorbed Bushman characteristics. The loss of their original high stature and the acquisition of steatopygia and of the spiral curled hair of the Bushman are due to intermarriage with the latter.

D. RANDALL-MACIVER.—*The Ruins of Rhodesia.*—The substance of this paper will appear in Mr. MacIver's forthcoming book, *Medieval Rhodesia.*

REV. H. A. JUNOD.—*The Thonga Tribe.*

J. W. SHEPSTONE, C.M.G.—*The Native Tribes of South Africa.*

REV. W. C. WILLOUGHBY.—*Notes on the Totemism of the Becwana.*—[*Journ. Anthr. Inst.*]

REV. E. GOTTSCHLING.—*The Bawenda.*—[*Journ. Anthr. Inst.*]

C. A. WHEELWRIGHT.—*Native Circumcision Lodges.*—[*Journ. Anthr. Inst.*]

Apart from the formal meeting, the members of the Association witnessed dances at Mount Edgecombe Sugar Estate, near Durban, and at Henley, near Maritzburg. The latter was on a great scale, in the presence of the Governor, as supreme chief, and included the marriage ceremony of the chief of the Zulu tribe of the location. In both cases the dances were genuine, the dress, &c., were all native except that the performers carried staves instead of assegais. Dances were also witnessed at Johannesburg and in Portuguese territory.

Congress. **Announcement.**

The Fifteenth International Congress of Americanists. **108**

The Fifteenth International Congress of Americanists will be held at Quebec from September 10th to September 16th, 1906. The following regulations have been made with regard to the programme :—

In arranging the preliminary programme, the committee will adhere to the following rules :—

1. Papers will be listed on receipt of title.

2. Papers will not be assigned a place on the preliminary daily programme unless an abstract has been received, as required by the rules and regulations of the Congress.

3. Papers to be read will be arranged according to subject-matter, in a number of divisions corresponding to those of the general programme ; and papers belonging to the same division will be presented, so far as feasible, on the same day.

4. Papers in each division will take precedence in the order of the receipt of abstracts.

5. Authors who intend to submit more than one paper to the Congress are requested to designate the paper they desire to read first. The rest of their papers will be placed at the end of the preliminary programme of the respective divisions.

In order to insure the prompt publication of the proceedings of the Congress, the committee recommend to the Congress to set the latest date for the receipt of completed manuscripts and of notes of discussions, October 1, 1906. F. BOAS.

PRINTED BY EYRE AND SPOTTISWOODE, His Majesty's Printers, East Harding Street, E.C.

For
USE IN LIBRARY
ONLY
DO NOT REMOVE
FROM LIBRARY

72.05
66
134764
Man; a monthly record of anthropological science. v.5, 1905
DATE
NAME
DATE
JUL 1 8 1916
134764
Stanford University Libraries
3 6105 008 415 072